PARTNER VIOLENCE IN THE AIR FORCE:
EVALUTATING REPORTING BEHAVIORS AND RECIDIVISM

A thesis submitted in partial fulfillment of the
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Virginia Commonwealth University.

By

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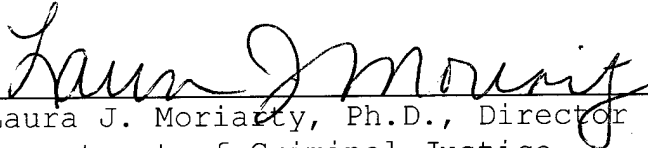Associate Professor
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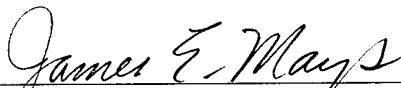Virginia Commonwealth University

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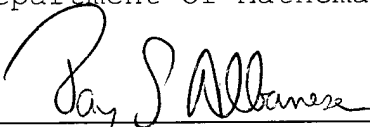
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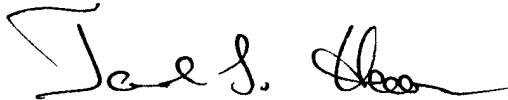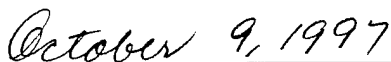Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

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LIST OF ABBREVIATIONS

AFIT – Air Force Institute of Technology

E1-E4 – Bottom four enlisted ranks in the Air Force
     (Airman Basic through Senior Airman)

E5-E6 – Middle tier noncommissioned officer ranks
     (Staff Sergeant and Technical Sergeant)

E7-E9 – Top tier of noncommissioned officer ranks
     (Master Sergeant through Chief Master Sergeant)

NFVS – National Family Violence Survey

O1-O3 – Bottom three commissioned officer ranks
     (2nd Lieutenant to Captain)

O4-O5 – Middle two commissioned officer ranks
     (Major and Lieutenant Colonel)

PCS – Permanent Change of Station

TDY – Temporary Duty

USAF – United States Air Force

ABSTRACT

PARTNER VIOLENCE IN THE AIR FORCE: EVALUTATING REPORTING
BEHAVIORS AND RECIDIVISM

By Elliot H. Graves

Much recent research effort has been targeted toward

choosing certain domestic violence interventions to

decrease recidivism in offenders receiving these

"treatments". The differences in recidivism across these

interventions have usually been found to be small or

nonexistent. However, little research has examined the

effects of these expected official responses on victim

reporting behaviors. Also, little research has been done

on desistance in military domestic violence offenders who

are not reported.

This research examines victim reporting behaviors and this unreported offender desistance rate in the US Air Force. It looks at the selection of options targeted to create change in victim reporting rates and assesses the relative impact of changing this rate versus changing the reported offender recidivism rate. This study specifically looked at married Air Force couples living in the United States.

The data for this study was collected using a mailed questionnaire, which used the CTS2 to collect the spouse violence data, with appended questions allowing respondents to define actions as self-defense. The response rate was 30% (n=255).

The recidivism rate among unreported offenders was 63%. Self-reported likelihood of reporting was found to be significantly affected by several anticipated official agency responses. Mandatory arrest was a significant deterrent to reporting. Protection of first-time, minor offenders from career-affecting actions was found to significantly improve the reporting rate, as were privacy safeguards and mandatory counseling policies. The impact of reporting rate changes were found to vastly outweigh

expected changes in the treated offender recidivism rate when measured by total expected cases of offender recidivism. Reporting-centered policies were also found to be superior to arrest-type policies using this same criteria.

Incidence rates were very similar to those reported in civilian studies. Significant differences were found between men and women in use of severe physical tactics not in self defense, and in the amount of injuries sustained. Self-defense accounted only for a small percentage of total tactics used. Although only 8.5% of victims reported their victimization to an official agency, over one quarter had told a friend or neighbor about the incident.

CHAPTER I

INTRODUCTION

This research attempts to examine reporting behaviors in the spouses of members of the Air Force and to analyze the strength of the effects of these reporting behaviors on total cases of repeated partner violence. By quantifying the effects of different incentives to reporting, it extends current reporting research on military populations (Caliber, 1996a, 1996b). Also, an attempt is made to study the partner violence recidivism rate in couples that do not report the violence. That is, for every 100 couples that have a first physical incident, in how many of them will the offender go on to abuse again.

This study then joins these two pieces of data together with current knowledge of the effects of official interventions on offenders to calculate the relative efficacy of offender- and reporting-centered policies. By looking at the expected effectiveness of various intervention models and comparing them, an attempt is made to identify several intervention policies that would be

expected to have the largest effect in decreasing second instances of spouse abuse. Ideally, these policies could then be subjected to experimental research, resulting in a positive identification of an improved way for the Air Force to deal with incidents of domestic violence.

There are several reasons for using an Air Force sample in this study. First, the homogeneity of this group may eliminate some of the counteracting effects that have confounded researchers in some previous partner violence experiments.

Secondly, the Air Force has its own police, legal, and treatment systems. It follows that these should be tailored to the specific characteristics of domestic violence in this population.

Also, the recently released Quadrennial Defense Review seems to predict that the Air Force may be entering a phase of modest drawdowns with their increased stress on Air Force families. Thus, this is a population that may be entering a time of increased risk.

Within the military, this study has implications for batterer and victim treatment, the police process, and the sanction process. The results will also likely be portable

to the other military services, such as the Army, which seems to have the greatest problem in this area (Caliber, 1996b). Further, the efficacy of reporting-centered policies may have significant implications for the civilian sector as well.

One note here: This study is aimed at deterring second offenses. This research does not address preventative measures for non-offenders, but looks at measures to prevent second and subsequent offenses, or reoccurrences. Therefore, the term deterrence in this study refers to the prevention of subsequent offenses.

CHAPTER II

LITERATURE REVIEW

There are three major schools that have emerged in domestic violence research. The first is the psychological school, which sees certain individual psychopathologies as critical keys to the onset of battering behavior (O'Leary 1993). They point to characteristics such as impulsiveness, borderline personality, antisocial personality, and dependency, as well as histories of child abuse or rejection (Dutton, Starzomski, and Ryan, 1996; O'Leary 1993) to predict family violence causes and tendencies.

The second school is the sociological school, which focuses on factors such as age, sex and ethnicity, and on the effect of social institutions. With respect to family violence specifically, they see the family as a social structure in which actors compete for resources, power, and respect and in which physical violence is a means (albeit a dysfunctional one) for achieving these ends, especially in

certain subcultures that seem to condone violence (Gelles, 1993a).

The third school is the feminist school. In this school, abuse is a result of a patriarchal control system, and violence, along with other forms of abuse and intimidation, is a tool for the male to gain and maintain control and power (Yllö, 1993).

Although these schools and their proponents seem to vary widely in their approaches, most of them (with the possible exception of some in the feminist school) concede that their approach does not cover all cases and is not mutually exclusive with the other theories.

Also, the majority of research behind each school is often of a different origin. The psychological school relies heavily on psychometric tests on clinical populations, while the sociological school relies heavily on surveys of general populations. Feminists focus more on case studies of battered women in shelters. As Straus (1993b) points out, these are different populations, and the different types of offenders and victims examined by each of the schools may very well account for many of the conflicting results from each school. Thus, although each

school may see clear theoretical and practical implications in their analyses of their own subgroups, when viewed in a larger and more heterogeneous population, some of these theories often lose their power. Although this is certainly an overly simplistic explanation, it serves to illustrate one of the foundations of this study, the analysis of a specific subgroup.

This study takes a sociological school approach in that it uses an epidemiological survey to examine this issue. However, some of the ideas for victim empowerment and the protection of the victim from danger and from the adverse effects of offender-targeted interventions come largely from the feminist literature. Finally, the study has more of a sociological and psychological school goal, to analyze how to maximize reporting and hence bring more couples into the sphere of counseling and treatment.

The Minneapolis Experiment and Its Effects

One of the key events in the development of partner violence research that has continually caused conflict between these groups has been Sherman and Berk's Minneapolis deterrence experiment and its effect on criminal justice system policies toward domestic abuse offenders and victims

(Sherman and Berk, 1984; Buzawa & Buzawa, 1993a; Bowman, 1992; Frisch, 1992). In this experiment, police administered one of three "treatments" to perpetrators of misdemeanor domestic assault: arrest, separation of the parties, or advising. The researchers then followed up at the six month point, checking for the affects of the various treatments on recidivism. The results seemed to show that the arrest treatment resulted in a 10% recidivism rate, well below the rate for just separating the couple (24%). The advising rate was statistically indistinguishable from the other two (Sherman and Berk, 1984).

In the wake of this study, many states began presumptive or mandatory arrest policies for batterers and the National Institute of Justice sponsored a host of replication studies (Gelles, 1993).

Unfortunately, the results from the replication studies were not nearly so clear, and the controversy about what the data does and does not say is still not fully settled. Also, several possible methodological problems have been identified in the Minneapolis study (Buzawa and Buzawa, 1993). Although a case can be made that arrest is still slightly better than the other options for specific

deterrence, it is clear that these aggregate studies did not clearly replicate the power of arrest in deterrence as seen in the Minneapolis study (Berk, 1993).

However, this has not stopped the exponential growth in the number of jurisdictions adopting mandatory arrest policies. This is further fueled by federal grants that are only available to agencies with such a policy.

Although the replication studies did not show the same power of arrest in the aggregate as was seen in Minneapolis, analysis of the subgroups involved in these experiments has seemed to indicate that the conclusion to be drawn from these experiments is that not all of the effects of criminal justice interventions are weak.

Instead, it seems that there are many strong, but counteracting, effects at work. Sherman et al. (1992a, b) have found that the small differential effect of arrest stems largely from the fact that arrest seems to deter employed offenders, or those that have a "stake in conformity". On the other hand, it seems to even increase violence in cases where the offender is unemployed, and has very little stake in conformity. Clearly, it seems the research is pointing in the direction of studies with

specific subgroups to eliminate the confounding effects of these counteracting influences. In this case, the military provides an ideal subgroup for study, in which all of the members of the subgroup are employed, most will have a high stake in conformity, and the military's unique legal and policing system could allow officials to implement specialized interventions specifically geared to the characteristics of spousal violence in that subgroup.

Study of Subgroups - the Military and the Air Force

As mentioned above, some of the conflicting aggregate results in research from the various "schools" and arrest experiments seem to come from differences in the treatment's effects on sample subgroups (Fagan, 1995; Sherman, 1992a,b). Some of these differential treatment effects were also observed based on a military subgroup in the Colorado Springs replication study (Berk, 1992a). Indeed there are many peculiarities of the military population that make it distinct from aggregate populations in the realm of domestic violence.

Numerous media reports have alleged a continuing problem with domestic violence in the military. Research also often points to members of the military being over-

represented in domestic violence reports. A 1989-94 research study conducted for the Army suggested that one in every three Army couples had experienced an incident of spouse abuse in the last year (Thompson, 1994). This contrasts drastically with the 1 in 8 figure found in the more heterogeneous sample of the 1985 National Family Violence Survey (Gelles, 1993). This overrepresentation also appeared prominently in Berk's Minneapolis replication study in Colorado Springs, where military couples accounted for 24% of domestic violence calls, while comprising only 7% of the population (Berk, 1992a).

Many also believe military spouses are less likely to report (officially or in surveys) than their civilian counterparts due to a military family's social isolation and the fact that reports may result in loss of rank (pay) or unemployment for the offender (Caliber, 1996a; West, 1981). This means that, even if military family violence rates are higher, the hypothesized decreased tendency to report many make this increased rate hard or impossible to discover.

Cronin (1995) used a unique approach to bypass this problem. He used a sample of college students from

military and civilian households in Germany, asking them to report on violence in their parents' relationships. He found a significantly higher incidence of partner violence in the military couples in several categories. Further, he also reported a much higher incidence of violence in commissioned officers than spouse- or self-report studies had found (Caliber, 1996b). If this research is accurate, it would seem there is also a difference in the likelihood of reporting (at least on surveys) between enlisted and commissioned members and spouses. However, there is one large caveat here. Cronin's sample was fairly small, comparing 116 military and 86 civilian couples.

Two recent studies have examined abuse in the Air Force and Army. The self-report based Army study concluded that 228 per 1000 active duty males and 311 per 1000 active duty females reported committing moderate or severe aggressive acts on their spouses in the past year. In contrast, the rate of officially reported partner violence during this period was around 18 per 1000 active duty members (Caliber, 1996b). However, this study was conducted in the middle of one of the largest military force reductions in U.S. history, a situation that caused

considerable job uncertainty and stress, especially in Army families, since the Army was the service hardest hit by the personnel force reductions.

A similar Air Force study was conducted by Caliber Associates in 1995. This was a self- and victim-report instrument included as part of an Air Force Needs Assessment Survey. It showed that 132 per 1000 active duty males and 205 per 1000 active duty females reported perpetrating moderate or severe violence in the last year. This compared to an official report rate of 8.7 per 1000. These results serve to distinguish these two services as separate subgroups, calling into question the frequent research practice of doing "military" studies without specifying a branch of the service. Also, it seems to confirm a huge lack of reporting of domestic violence incidents. In both cases, the top possible reporting rate that can be deduced from these figures is still under 8%. One caveat on the Air Force data should also be noted in this report. Since this survey was part of an Air Force Needs Assessment Survey and requested extensive and specific demographic data, it would likely not have been viewed as an anonymous instrument by respondents.

Explanations of this possibly increased violence rate in the military have ranged from simply the demographic makeup of the armed forces (Caliber, 1996c; West, 1981) to the types of training soldiers receive (Grossman, 1995). One of the primary explanations for the overrepresentation of the military population in spouse abuse statistics is demographics. That is, the military has more 1) young people, 2) new couples, 3) young couples with low incomes, and 4) people with approximately 12 years of education than the United States does as a whole. As each of these has been proposed as a correlate to spouse abuse, a higher rate of spouse abuse in the military would be expected from these facts alone (Caliber, 1996c; Fagan, 1995; West, 1981).

There are other factors, though, that have been hypothesized to contribute to this problem.

First, because of military deployments or temporary duty assignments (TDY) away from the home base, these couples are often separated. This means that at the end of a deployment, the military member will have to reintegrate back into the family. This disrupts patterns and structure established after their departure. Also, in families where

the military spouse takes a traditional leadership role, reintegration means reassuming that leadership role in the home from the spouse, who carried it for the duration of the deployment. Even if the family does not use a traditional leadership role, there will likely be a re-division of household tasks, which may produce much of the same tension. There are many power and control issues in this type of situation that fit well into a feminist model (Yllö, 1993).

Secondly, most military couples are reassigned, and must move, every 2-3 years. In addition to heightened stress levels during this time, this may produce a period of increased isolation, especially for young couples who live off the military installation and may not have more than one car, which the military member may drive to work (Caliber, 1996c; Nielson, 1984; West, 1981).

A social control approach can also be used to look at the military couple's situation. The military exerts a concerted effort to bond soldiers to their units and to the people they work with. Also, the military is relatively unforgiving compared to the civilian world when norms are broken, both in informal and formal sanction methods.

Because of the nature of the Uniform Code of Military Justice, these norms do not have to be laws or statutes, but can simply be gross displays of poor judgment or 'conduct unbecoming'. Based on this social control approach, an airman can be expected to readily conform in a social setting. However, the isolation of the family may serve to distance the airman from this control system while at home, contributing to a Family-Only cycle of abuse described in some studies (Straus and Gelles, 1990).

However, although the military is relatively unforgiving when certain norms are broken, it can and has been argued that mild violence may not be outside of some military subgroups' norms. It should come as no surprise that the focus of some military training is to prepare soldiers for violence and that "killing people and breaking things" is a necessary function of the military (Grossman, 1995). There are two reasons often proposed for a higher acceptance of violence in the military. First, it could be that people who accept or like violence will be attracted to the military image or lifestyle and will join. A second explanation would attribute this characteristic to military training and socialization. Both may be partly correct.

Using a "subculture of violence" explanation, criminological theory would suggest higher rates of mild violence among military members than in a civilian population, but that violence exceeding a certain group acceptability level will be less likely (Williams and McShane, 1994). A cursory look at the 1985 National Family Violence Survey (Straus, 1988) and Caliber (1996b) data seems to indicate that this may be true, as the amount of severe violence as a percent of total violence is less in the military data. However, this is far from conclusive.

Also, it can be argued that military members, because of the security of military employment, retirement benefits, and the uncertainty of employment if discharged, will also have a high stake in conformity (Sherman, Smith, Schmidt, and Rogan, 1992). This has implications for this study as well. As mentioned earlier, an individual's high stake in conformity, together with the social control of the unit, would predict that any contact with disciplinary agencies would have a large deterrent effect.

Official Action vs. Null-Treatment Recidivism

In the Minneapolis arrest studies and subsequent replications, the sample studied was reported offenders

only (Berk, 1993). This is also true of the parts of the Caliber (1996b) studies that examined recidivism. Therefore, the deterrent rate difference in these studies resulted only from the effects of the deterrent treatments on reported offenders. While it is true that this sample provided a good basis for testing competing police strategies to directly affect offender recidivism, it did not give a complete picture of the partner violence situation. To best look at this situation, it seems that the sample must include the couples involved in non-reported domestic violence as well. It is in this sample that the true null-treatment control group is found, those who had no police interaction because their cases did not come to police attention.

For future experimental studies, this type of control group could be identified during the experiment's time frame using epidemiological survey self reports, and similar follow up procedures to those used for the officially reported cases could be used to track their recidivism. Although the measurement approach in this study will be less rigorous experimentally and less comparable to the arrest study recidivism measurements, the

next section should show how this null-treatment recidivism is vitally important to policy in the bigger picture of handling domestic abuse.

This may be especially true in the military, because of the stake in conformity effect studied by Sherman et al. (1992a, 1992b) that predicts a tendency for those with a high stake in conformity to recidivate less if publicly exposed, and to be more affected by official contact.

Unfortunately, this differential effect for the military makes civilian studies of these rates of questionable applicability. However, the limited literature on recidivism in reported and unreported offenders will be discussed in a subsequent section.

The Effects of Reporting Behaviors

Reporting of domestic violence incidents is an especially key area, both for the military and for the public as a whole. The case is made below that this area, and not direct specific deterrence via arrest or other offender-based intervention, is probably the area in which the police and the criminal justice system can increase their impact on domestic violence.

In the rush of political and research synergy following the Minneapolis study, deterrence became the object of continual attention (Buzawa and Buzawa 1993). The primary research question was "What criminal justice actions on the scene of a partner violence incident will directly reduce recidivism most?" This overlooks one major fact. The fact is police do not go to, or even know about, many spouse abuse incidents. In fact, research indicates that as many as 93% of domestic violence incidents involving physical assault may go unreported (Straus, 1993a). The cursory look at the military studies above seems to confirm this for this study's population of interest. For the following discussion, it is also important to remember that although some of the Minneapolis replication study interventions worked somewhat better than others in certain subgroups, none of the interventions was vastly more effective than the others (Berk, 1993).

With these two facts in mind, it seems it is time to expand the focus. Failing prevention, an argument can be made that there are two aspects that determine the success of the "system" in decreasing recidivism, 1) how effective it is at reducing recidivism when it handles an incident of

the problem and 2) how many of the incidents that occur does it handle? The Minneapolis experiment and its replication studies have focused on using the criminal justice response to maximize this first area. This study examines the possibility that the second area may be the area in which more benefit can be achieved. The "arrest" studies compared one mode of police reaction to another in their direct effects on measures of recidivism. The differences were small, or in some cases, even unidentifiable.

However, these results were not compared against a "null treatment" of no police response due to no reporting. This is significant, since recent research has found this null-treatment recidivism rate in the civilian community to be somewhere around 60% (Jacobsen et al., 1996; Quigley & Leonard, 1996; Tolman, Edleson, & Fendrich, 1996; Syers & Edleson, 1992). This rate is discussed in more depth in its own section below. The diagram on the following page depicts the focus of these experiments on the small change in recidivism that could be created by using different interventions, and shows the larger group of victims and offenders not adequately considered by these studies.

Figure 1
The Arrest Study Model

The Arrest Study Picture

Reported Incidents — Reoccurrence — Arrest — VS. — Reported Incidents — Other Options — Reoccurrence

The Rest of The Picture

Unreported Incidents — No Intervention — Reoccurrence
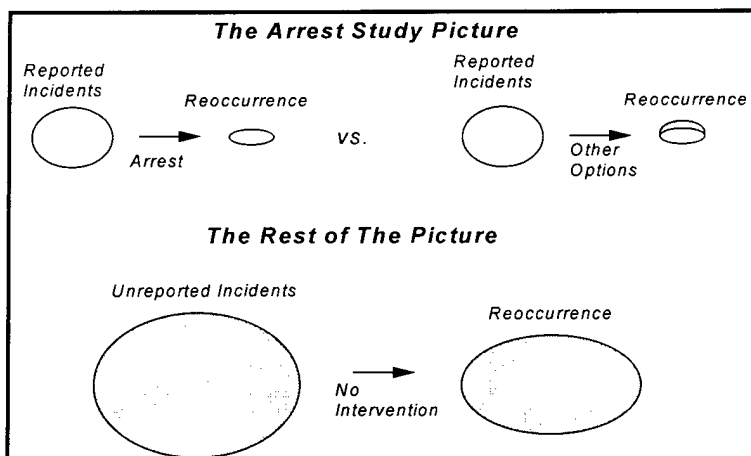
These relationships are depicted mathematically in the accompanying box. As can be seen from these equations and diagrams, the size of null-treatment recidivism in the subgroup is critical to discovering whether it is reporting or specific deterrence that is driving the prevalence of repeat incidents of partner violence.

Table 1
Deterrence Equations

Minneapolis Model
$$\text{Recid per 1000 people} = (I \times A_M) \times R_M$$

Modified Minneapolis Model
$$\text{Recid per 1000} = (I \times A_M) \times R_M + (I - (I \times A_M)) \times R_0$$

Actual Deterrence Equation
$$R/1000 = I \times (P_1 A_1 + P_2 A_2 ..) \times (P_1 R_1 + P_2 R_2 ..) + (I - (I \times A_{avg})) \times R_0$$

Simplified Deterrence Equation
$$\text{Recid per 1000} = (I \times A_{avg}) \times R_{avg} + (I - (I \times A_{avg})) \times R_0$$

Where   R = Recidivism rate (Percentage)
        I = Number of first incidents/1000
        A = Percentage of people reporting
        P = Percentage of people impacted by
            a certain set of interventions

Subscripts:
        R = Reported
        0 = No (Null) Treatment
        M = with a mandatory arrest policy
        avg = the average across the official
            interventions used in the
            system under consideration
        1,2,3... = various sets of interventions

If it was discovered that recidivism after any official agency response was significantly lower than for unreported abuse (the true null-treatment condition), then reporting takes on huge importance. At that point, the slight differences in post-treatment recidivism rates based on different "system" actions might become a small factor beside the large difference in total recidivism based on the effects of those actions on victim reporting. Therefore, a "system" policy that produced slightly better direct deterrent effects might be vastly outperformed (in terms of total cases of recidivism) by a policy directly affecting recidivism less and reporting more. A visual depiction of this situation is shown below.

Figure 2
Reporting-Centered Versus Offender-Centered Approaches
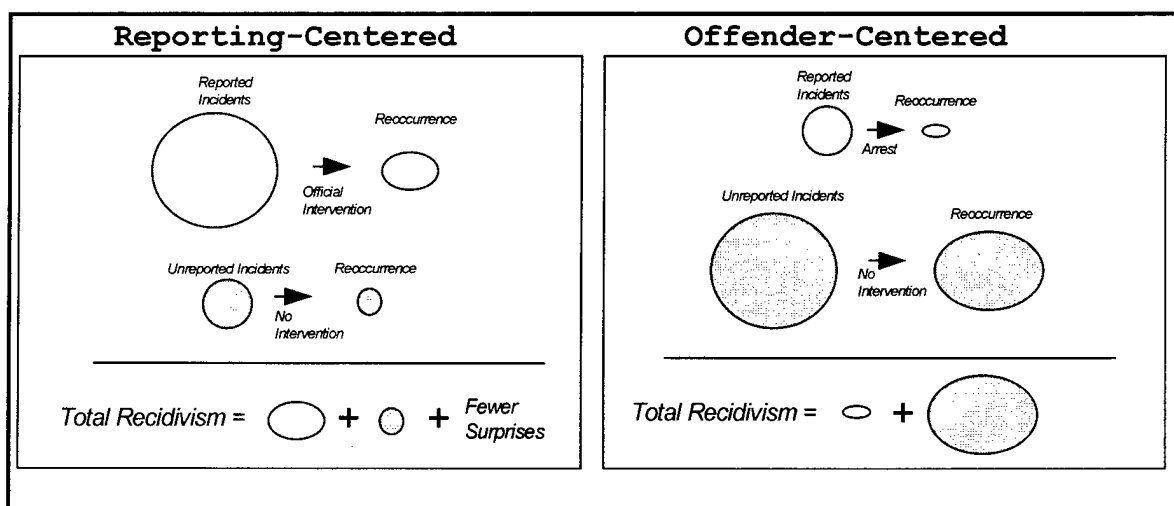
Critiques of the "arrest" studies have even pointed to a possible lowering in reporting due to a mandatory arrest policy (Buzawa & Buzawa, 1993). In fact, Berk himself assumes this lowering of reporting when evaluating the replication studies (Berk, Klapp, and Western, 1992b). If this is true, an evaluation and debate is necessary regarding the relative importance of designing criminal justice policy to increase reporting instead of focusing on decreasing recidivism. In the wake of data that seems to show small changes in recidivism across different criminal justice responses, the choice of official actions in order to maximize reporting should be closely examined.

Official actions may be far more effective in affecting the arguably rational behavior of deciding whether or not to report than they are in affecting the arguably impulsive behavior of the batterer.

However, only some aspects of this problem can be handled in this study. This research should give a good indication of the relative reporting likelihood of Air Force spouses across different interventions and it should give a good idea of null treatment recidivism. However, the sample size in study was predicted to be (and was) too small to

examine the recidivism rate among those who are officially reported or to analyze the efficacy of varying official interventions on this post-treatment recidivism rate. Instead, a rough idea of these values must be extracted from various other research literature (Caliber, 1996b; Gelles & Straus, 1988; Berk et al., 1992b; Brewster, 1997) for use in this analysis.

The primary hypothesis for the combination of military couple reporting behaviors and null-treatment recidivism is that when evaluated in the Simplified Deterrence Equation, the education / choice / follow-up model of criminal justice intervention will be superior to arrest and to the current system, even when measured by its deterrent value (of subsequent incidents) alone. One caution is due here. As this is a survey, not experimental research, the values in these equations, even at the end of the study, will be rough ideas only. Ideally, this research will identify a set of 3-4 "best" interventions that would reduce recidivism to a minimum. Then, these interventions ideally would be fielded for experimental testing as mentioned in the introduction.

Measuring Recidivism

As mentioned before, there is limited definitive research on domestic violence recidivism, and even these studies may have limited application to a specialized subgroup such as the Air Force. However, looking at these studies gives some idea of the rates that should be expected in this research project. Also, since it is unlikely that the sample size for this study will permit measurement of the recidivism rate among reported offenders, a review of the literature in this area is necessary to establish an approximate figure or range on which to base other calculations.

First, the recidivism rate among unreported offenders will be considered. Three major studies shed light on this value. First, O'Leary et al. (1989) studied a group of couples from marriage through the first 30 months of married life. He found that, of those who reported violence as a victim in the relationship prior to marriage, 51% experience another incident of violence (the offender had recidivated) after 18 months and 64% reported a reoccurrence by the 30 month point. A different study by Woffordt, Mihalic, and Menard (1994) used a slightly

different measure of recidivism, but their results were compatible with the O'Leary study. They created a baseline by measuring abuse in the prior year in a sample of 155 women. They then compared that to abuse found in the 12 month period prior to a re-measurement of these women at the three year point. They found that 52% of those who had initially reported violence reported it again. However, since some of these women were not married and since some of the women in the sample had changed partners between the two measurements, this study's findings are not directly applicable to the situation examined here.

The third study, conducted on recently married couples, found a three year recidivism rate of 76% (Quigley & Leonard, 1996).

All three of these studies looked at young couples. The only longitudinal study that did not focus on young couples was conducted by Feld and Straus (Straus & Gelles, 1990) based on results from the second National Family Violence Survey and a 1 year follow-up panel study. However, the researchers experienced 50% attrition of their sample and only reported rates of recidivism in the second year based on the amount of severe abuse incidents in the

first year. However, for the one year period studied, they found recidivism rates of 52% for those with 1-2 severe assaults in the first year and 67% for those with three or more.

In his review of non-longitudinal studies on null-treatment recidivism (or its converse, desistance), Dutton (1995) also concludes that this rate is around 67%.

In contrast to the deistance and null-treatment recidivism rates above, the recidivism rate in reported offenders has proven extremely elusive for researchers (Stith & Straus, 1995). In this area, the Caliber studies (1996b, 1996c) offer a look at a military population. In analyzing official records, this research group found that, of the offenders still in the military after three years, approximately 14% had been involved in another substantiated instance of domestic violence in the three year period examined. Of course, this number only considers those offenders who were reported a second time.

A study using a somewhat similar definition of recidivism (one that required reporting) is reported by Tolman and Weisz (1995). Their study, however, used an 18 month window, and all police responses (for cases that were

later substantiated or unsubstantiated) were used. They

found a recidivism rate that varied between 23.6% and

35.3%, depending on whether the offender had been arrested

for the first offense and whether the offender had been

found guilty or not.

Using victim reports and official data, Syers and

Edleson (1992) found rates between 20% and 48.9% for a 12

month window depending on the sanction received by the

offender after the first offense.

Using hotline and official police data from the

Milwaukee replication study, Sherman (1992) found similar

rates between 34% and 37% for reported offenders. Among

those who were employed, the rate was 33%. The window in

this study varied between 13 and 31 months from the

original offense.

As mentioned and supported theoretically previously in

this literature review, it seems likely that any official

contact with official agencies will have even more effect

on military members than it does on the employed civilian

subgroup. Another reason to suspect a decreased rate of

post-treatment recidivism in Air Force members is that

recent studies have pointed to an increased deterrent

effect, regardless of arrest disposition, when offenders
are prosecuted, judged guilty, or sentenced to any
sanction, even if it is only mandated counseling (Dutton,
1995; Tolman & Weisz, 1995; Syers & Edleson, 1992). Almost
every incident of abuse in the Air Force is automatically
pursued until it is substantiated or found unsubstantiated
(about 4 in 5 are substantiated), and mandatory counseling
is an often-used minimum remedy (Caliber, 1996a).

Certainly, although limited data is available, it
seems military members are far more likely than civilians
to face an adjudication process and subsequent sanctions
(Caliber 1996a, Sherman, 1992b, Straus & Gelles, 1988).
These facts, coupled with the fact that only 14% of
military members reappear in official data as opposed to
the higher civilian figures from Tolman & Weisz (1995) and
Sherman (1992), suggest that the rates reported in the
reviewed civilian literature may serve as guides, but that
these rates are likely higher than the actual Air Force
rates for post-treatment recidivism.

Since this number for treatment recidivism seems
elusive at best, the analyses in this research which

require this figure will use 30%, but will also report the results when this figure is varied between 20% and 50%.

Reporting Behavior Factors

There are four factors of the military legal system that need to be reviewed before further discussing reporting behaviors. First, in the military, an abused spouse has three main options for official reporting of the abuse. He or she can report to the police, to the military spouse's unit through the member's supervisor, commander, or first sergeant, or they can report it to the base family advocacy office. Any of these will result in an official investigation. Second, in most cases, the family advocacy office, not the criminal justice system, will be the primary agency to investigate an incident and make the determination as to whether the abuse is substantiated or unsubstantiated. These people are typically social workers or members of the health professions, especially psychology. Third, the commander of the military member's unit is usually the final authority as to the discipline that the soldier will receive. Wide discretion is normally allowed, and spouses presumably are aware of this. And finally, forfeiture of pay and removal of rank (and consequently, income) are

typical sanctions in the military justice system. These sanctions can certainly hurt the victims as well as the offender (Caliber, 1996a; West, 1981).

Obviously, the key to taking advantage of the effects of a reporting-centered system is identifying the disincentives to reporting and their relative strengths, and designing interventions that minimize the disincentives while maximizing the incentives to report. A recent study by Caliber Associates (1996a) used focus groups and reports from known victims of partner violence to identify disincentives to reporting for military spouses. Although information on relative strengths could not be obtained and although the groups and bases used in these focus groups were certainly not picked to provide representativeness, this study provided an excellent view of items to include on the instrument for this study. The box on the following page summarizes the key findings from this study.

Table 2

Disincentives to Reporting Identified by Caliber Associates

General Reasons for Not Reporting	Military-Specific Reasons for not Reporting
• Lack of information on who to tell or how to get help	• Fear that the active duty member's career would be in trouble
• Fear of retaliation	• Poor image of family advocacy services
• Fear they would not be able to support themselves of their children	• Fear that the active duty member would be punished by the military
• Fear their family or friends would think badly of them	• Fear that it would be unpleasant for the active duty member at work
• Belief that they could handle the abuse by themselves	• Fear that the active duty member would be kicked out of the military
• Belief that the problem was not that serious	• Distrust of the military
• Embarrassment about the abuse	• Confusion over what the military sees as abuse
• Belief that it was a personal matter	• Perceived lack of services to help the victim
• Fear of a family break-up	• Sense of Isolation
• Fear of being blamed	

In addition to the information in the table above, four broad areas from the research literature have been identified that have been proposed as affecting victim reporting (Caliber, 1996a; Edleson & Eisikovits, 1996;

Hilton, 1993; Frish, 1992; Bachman & Saltzman, 1995a). Some of the main options to encourage reporting seem to lie in four areas: 1) victim ability to chose between available policing and follow-up options, 2) victim education prior to, at, and after the incident, 3) safety measures to prevent retribution by the offender, and 4) provision for follow-up.

Many of these reporting incentives have another huge benefit as well. They actually may provide more help and empowerment to the victim than existing policies and may help them not to feel as trapped in their situation. This is an area that is often neglected by empirical approaches because of the difficulty in measuring someone's successful return to normal life or the benefit that getting help from an agency can provide for the victim.

Although this study is an empirical "greatest good for the greatest number" approach, there is undoubtedly also a hidden but significant value in lessening the feeling of being trapped that many victims seem to experience when the option of reporting is seen as impossible (Caliber, 1996a; Hart, 1993; Yllö, 1993). The actual benefits of this approach may lie as much in the area of victim assistance

as in offender deterrence.   It should be noted that these two areas are far from mutually exclusive.   Straus and Gelles (1988) point out from their NFVS data that one of the most effective methods used by victims to stopping domestic violence seemed to be negotiation with the offender, especially with the conviction that the violence must stop immediately.   This, they note, often requires some bargaining power or usable options on the part of the victim.   Making reporting an acceptable and usable option and providing the victim some control over the ensuing process holds the possibility of providing this type of power for negotiation to the victim.

There is one caveat to any victim-control type of policy, however.   That is that it must be structured to provide separation from the offender for at least the initial assessment and decision period, and must be set up to protect and advise the victim, freeing them to make educated, rational choices to protect themselves and their families.   Also, a provision for long term follow-up and supervision of the offender must be established.   The victim must not be forced to make a decision and then required to go it alone. If such a poorly designed setup is

used, a policy based on a choice model may encourage offender attempts to sway the victim's decisions. Although these are policy and not research considerations, they are mentioned only to acknowledge that they exist and to prevent premature critique of the value of this research based on this factor.

The research hypothesis in this area is that victims will be more likely to report when education material is available, when they will have some control over the ensuing process, when they know they will be protected in a certain way in advance of reporting, when certain disincentives are removed (such as sanctions that may punish the victim as well), and when there is a provision for long term follow-up.

Knowledge of Violence in Neighbors and Friends

There is one other consideration that will be explored in this study. That is, the extent to which military members know of and report partner violence in their neighbors' and friends' relationships. In interviewing victims whose cases were officially reported, Caliber (1996a) found that 75% of these victims had spoken to

someone about the problem. The obvious question is how many of those who do not ever reach the official intervention stage also tell others about the problem.

Also, an important question is how much do neighbors know about these problems even when no one directly tells them. This is important information in considering options such as the mandatory third party reporting requirement in child abuse cases. California is the only state that currently has a mandatory reporting law for spouse abuse (Dutton, 1995). This section of the study is exploratory and simply provides data on the potential utility of such a requirement in the Air Force.

CHAPTER III

METHODOLOGY

The main method of data collection in this study was the mail survey found at Appendix A. However, these data were combined with post-treatment recidivism data from other studies when evaluating various interventions in the deterrence equations.

Sampling

There are currently approximately 299,000 members in the active duty Air Force who are stationed in the continental United States. Another 81,000 are stationed overseas. The sample for this study was drawn from those in the United States for several reasons. First, the mail to overseas areas is slow and unpredictable. Secondly, since military members move frequently and almost always rotate through overseas assignments, there is no reason to believe these members will differ significantly from those in the states, except in certain demographic measures (see

the Evaluation of the Sample section below). And third, many members stationed overseas, although married, are not accompanied by their families on these tours and so have been separated from their spouses for many months. Including the spouses of these members would likely hurt validity as it artificially deflates prevalence and likelihood of recidivism measures. Since the database used in this study to select the sample cannot easily distinguish if a member's family is accompanying them on the assignment, all overseas couples were eliminated.

The names and home addresses of 975 Air Force spouses were drawn from the database maintained by the Defense Manpower Data Center in California to create this sample. First, all spouses located outside of the United States were eliminated from consideration, for the reasons detailed above. Second, for each remaining spouse, the first three digits of the home address zip code were compared to the first three digits of the zip code of the base recorded as the Air Force member's current duty station. The reason for this check is that it is estimated that up to 40% of the home addresses in this database are outdated, but that the current base information is correct

for well over 95% of the entries. (The USAF military
personnel center updates the base information, while
military members are responsible for updating their address
information each time it changes.) Comparing these two zip
codes lessened the possibility of losing a large portion of
the sample to bad addresses.

Due to the structure of this database, true random
selection was not possible. Instead, a substitute
stratified selection procedure was used to insure that the
records were not selected in a way that would bias the
resulting sample. To do this, the records remaining after
the first two steps above were sorted by the following sort
keys (in order): 8th digit of the Social Security Number
(SSN), day of birth, month of birth, name, and 6th digit of
the SSN, to create a sample that was not biased in any
predictable way. One note on Social Security Numbers is in
order here. Social Security Numbers are composed of three
parts. The first three digits reflect the geographic
region of issue and are therefore not usable to "randomize"
a sample. The fourth and fifth digits are issued in
sequence by each state and therefore indirectly reflect a
range of years of issue. Hence, these digit are similarly

not usable for this purpose. However, the last four numbers are issued in essentially a random manner (although small blocks of these may actually be assigned in the order that the numbers are issued, so that someone who received a SSN today may be 6040 and the next applicant at the same office might be issued 6041). Therefore, these four digits can be used to pull an unbiased sample. To ensure no recognizable bias, the resulting sample was profiled by first three digits of the Social Security Number (geographic origin) and base of assignment. The profile showed no bias in these categories. Sixty-five of the addresses were then randomly eliminated to result in the final desired sample size of 910.

Notes on Survey Administration

Surveys were mailed first class using stamps instead of metered postage. Although most studies have shown these two items to have minimal effect, studies which have shown a difference favor this type of postage except when compared to registered or certified mail, which is not feasible in this study (Bailey, 1994). Unfortunately, the only 78¢ stamp available at the time of the study was a

Women's suffragist stamp. Since the possibility of presenting a perceived researcher bias existed if this stamp was used, 2 normal (US Flag) 32¢ and one (Blue jay) 20¢ stamps were used. The survey was mailed with the cover letter in Appendix B, including an Air Force and VCU signature block to show sponsorship by an educational institution. Military members are often inundated with surveys, and this is an attempt to differentiate this survey from the many quality of life and customer service surveys these families receive. This sponsorship is also an effort to dissuade the potential respondent from thinking that nothing will come of the survey if they critique the status quo on military handling of domestic violence.

Fifty gift certificates for free small frosty desserts were donated to the study by Wendy's International to help in improving the response rate. These were included in a random sub-sample of surveys. A slightly different cover letter accompanied these surveys, which is in Appendix C. Although the names of the respondents who were sent the coupons were not recorded in order to maintain maximum anonymity, a different type of return envelope was used for

these surveys, so that the effect of the incentive on response rate could be measured.

The return envelope was pre-stamped using one commemorative aviation stamp, and two normal stamps. Although a business-reply permit would have saved some money in this situation, several studies have shown that using a stamp, especially a colorful, eye-catching stamp, helps to raise the response rate by as much as 6% (Bailey, 1994). This change in response rate was calculated to offset any savings from using business-reply postage. The surveys were mailed from Richmond, Virginia beginning on August 1, 1997, depending on destination. This staggered mailing was done to maximize the possibility that the packages would be received in the middle of the week. Some of the issues driving this decision are discussed in the Ethics and Timeline sections below.

A follow-up letter was mailed eight days after the initial mailing (see Appendix D). Of course, because of the anonymity of the survey, letters were mailed to all members of the sample. However, this reminder/thank-you letter also likely served to "prove" the anonymity of the survey to some people who may have been reluctant to fill

out the survey initially. In this way, it was thought that the follow-up might help the response rate more than usual because of the sensitive subject matter of the study and the hypothesized criticality of the respondent believing in the anonymity of the survey as a prerequisite for a large and honest response. In looking at the response rate over time (see Appendix F), this expected increase in the effect of the follow-up seems to have been valid. A second follow-up (see Appendix E) was mailed on August 29th to cover respondents who had been on vacation or moving during them initial contact phase. Because of the prohibitive costs involved, the follow-up letters did not include the survey package. Instead, respondents were asked to call collect if they needed another survey.

Ethical Considerations

There were two main ethical considerations regarding this study. The first was to maintain the confidentiality of the results. Therefore, the instrument used was an anonymous questionnaire with limited identifying demographic information, so the possibility that a respondent even could be identified, if such an attempt was made, was almost negligible. This eliminated doing a

double blind check on those that responded that they had
once filed an official report, but the limited benefits of
a double blind check were vastly outweighed by the ethical
considerations in this case.

Second was the responsibility to protect, as much as
possible, any battered spouse from the possible
consequences of receiving and filling out this survey.

This was done in three ways. First, personnel on the
bases were given no prior notification about this study.

Secondly, for most spouses, the survey should have
arrived in the middle of the week, during normal military
duty hours, when the military member is not usually
present. Although some military spouses also work, many do
not and this measure was designed to help those spouses or
others that do work but arrive home before their partner.
Also, this effect was helped by the fact that the survey
arrived in the late summer, when teachers are out of school
(many military spouses teach school since this job tends to
be flexible enough to accommodate the military family's
transient lifestyle). Secondly, many families would have
just arrived at their new duty station, since the summer is

the heavy season for military transfers, and the spouses may have not yet found work.

Finally, a cover letter explained and emphasized the confidentiality and anonymity procedures of the study. In addition to enhancing the validity of the responses, this was also targeted at alleviating some of a military member's nervousness, should he or she find or receive and open the survey.

Key Conceptualizations and Operationalizations

Some of the key items to be conceptualized and operationalized are explained below. Others will be explained in the Table of Key Variables.

First, **physical abuse** is defined in the first (reporting behaviors) section of the survey using excerpts from the Department of Defense (DoD) definition. This passage in the survey reads:

> The following list provides some examples of what the Department of Defense has identified as inappropriate physical conduct between partners when done against the partner's will: grabbing, pushing, holding, slapping, choking, punching, sitting or standing on, kicking, hitting with objects or assaulting with knives, firearms or other weapons.

Later in the survey, as the focus turns to violence in the respondent's relationship, this definition is made more specific by using the categories in the Revised Conflict Tactics Scale, or CTS2 (Straus et al., 1996). The definition is then operationalized to mean any physical tactic in the physical assault subscale of the CTS2. These are labeled A to L on the survey. This definition is consistent with the DoD definition given above.

Serious physical abuse is operationalized as an incident of hitting (not slapping), choking, burning, beating, kicking, or using a knife or gun on a partner. These are measured using items F-L on the CTS2.

Couple or **intimate relationship** is conceptualized as two people who have shared a close, personal, intimate relationship, such as being dating partners or spouses, lasting over 6 months. However, in operationalization and measurement, respondents not currently in this type of relationship will be asked to rate the last one they were involved in, as long as it fits the criteria above and ended less than seven years ago.

Official reporting is conceptualized as any report that will enter the complaint into a system for officially

sanctioning the offender. In the military, this includes the police, the chain of command above the member, or family advocacy. Abuse shelters are not counted as official reports.

The **likelihood of reporting** is a self-reported measure on a probability scale that reflects the respondent's likelihood to make an official report. Because this is a self-reported measure, it lacks the validity of an experimental measurement.

Victim control is operationalized as the ability to make some decisions (i.e. separation time period, etc.) about the process that follows a report of family violence and also the ability to put certain sanctions off-limits (i.e. pay forfeitures).

Time to Recidivism is conceptualized as the time from the initiating incident until another incident defined as physical abuse occurs. This measure lacks some reliability because of the difficulty in remembering these events.

Recidivistic Chronicity is conceptualized as the number of incidents in which the reported partner again used physical tactics within a year of being reported for a previous offense.

Total Recidivism is conceptualized as the number of offenders who use physical tactics (not in self-defense) in a second physical incident. Usually this will be reported as a percentage of the number who ever used a physical tactics (not in self-defense) or as a proportion of a certain population size. Total recidivism per year is the number of offenders per year who committed a first offense that year and then recidivate at any subsequent time. This variable is operationalized by asking the respondent has the partner ever been the first to use physical tactics in a second situation. This requirement that the offender be the first to use physical tactics may result in a slightly lower rate than might be argued for, but it eliminates true self-defense without relying on the subjective evaluation of the respondent.

Key Hypotheses

The key hypothesized relationships are that:

The deterrence value,

1a. of an official report, as measured by time to recidivism, is significantly <u>greater</u> than for the null treatment.

1b. of an official report, as measured by the percent of offenders who have not recidivated in the 12 months following the incident, is significantly <u>greater</u> than the null treatment/no report.

Note: the sample size may not permit a full analysis of the effects of official interventions, and data from other studies may have to be used to make these comparisons.

Victim Reporting:

2a. Victim likelihood of reporting will be <u>greater</u> when educational material is available.

2b. Victim likelihood of reporting will be <u>greater</u> when the respondent will have some control over the ensuing process, especially when this allows them to protect their family or partner from certain adverse consequences.

2c. Victim likelihood of reporting will be greater when the respondent knows in advance of reporting that i) they or ii) their partner will be protected in a certain way.

2d. Victim likelihood of reporting will be greater when there is a provision for long term follow-up.

2e. Victim likelihood of reporting will be greater when the disincentives identified by Caliber Associates are removed or mitigated.

3. The expected total recidivism, as projected in the simplified deterrence equation for the education, choice, follow-up, and disincentive-removal options will be less than for options including arrest.

4a. The amount of violence and percent of couples experiencing abuse will be greater in couples recently experiencing long periods of separation.

4b. The amount of violence and percent of couples experiencing abuse will be greater in couples who have recently relocated.

5. Official Reporting (actual and self-predicted likelihood) will be less likely among those who are more socially isolated.

Table of Key Variables

A brief summary of the key variables used in this research is provided in the following two tables.

Table 3
Key Variables

Hypothesis	Variable	Type	Operationalization	Level of Measurement
1a	Time to Recidivism	D	The amount of time from the initiating incident until the next incident	Ratio
1b, 3	Percent of Recidivists	D	The percentage of people who abused again after a first incident	Ratio
1 and 5	Official Report	I-1 D-5†	A report to an official agency, regardless of the agency's actions	Nominal
2 and 5	Likelihood of Reporting Under Current Option‡	D	A self reported probability of reporting an incident of abuse to an official agency given a certain situation	Ratio
2 and 5	Reporting Decision Under Current Option‡	D	A computed reporting "decision" for each case created by applying a 60% or 90% cut point to the reporting likelihood score	Nominal
2, 3, 5	Percent Reporting Under Option‡	D-1 D-5 I-3†	The percentage of people coded as reporters on the reporting decision variable above	Ratio

D = Dependent variable; I = Independent variable

† These variables are used differently in testing different hypotheses. Their usage in each hypothesis is listed. For example, Official Report is used as an independent variable in hypothesis 1 and as a dependent variable in hypothesis 5.

‡ Actually each of these three are coded as 15 separate variables reflecting each of the different reporting options studied.

Table 3

Key Variables(continued)

Hypothesis	Variable	Type	Operationalization	Level of Measurement
3	Total Expected Recidivism	D	As measured by the Simplified Deterrence Equation mentioned earlier	Ratio
3	Incidence of New Violence	I	Number of reported incidents including a tactic from A-L on the CTS2 which were the first such incidents for that offender	Ordinal
4	Amount of Spousal Violence in year	D	Number of reported tactics from A-L on the Revised Conflict Tactics Scale used in the last year	Ordinal
4	Violence in Last Year	D	A dichotomous variable depicting whether or not any physical tactics from the CTS2 were used by that couple in the last year	Nominal
4	Number of Couples w/ Violence	D	Number of couples reporting any incidents in the physical assault range on the CTS2 in the last year	Ratio
4a	Periods of Separation	I	Number of days separated in last year	Ratio
4b	How Recently Relocated	I	How long ago did the couple last relocate?	Ratio
5	Social Isolation #1	I	How often did the respondent report interacting with other military spouse or partners?	Ordinal
5	Social Isolation #2	I	How much involvement does the respondent report with social groups?	Ordinal

Measurement Tools

This study was conducted by a written questionnaire, a copy of which can be found in Appendix A. Whenever possible, questions were asked using the same language as was used in the National Family Violence Surveys (NFVS) conducted by Gelles and Straus (1988) in 1975 and 1985. This was done both to allow the comparison of data and because these questions are well-tested items that were used by prominent researchers in the field. Many of the demographic questions on the survey, along with the questions on alcohol usage and abuse in the family of origin, are from this source. However, due to the nature of this research, specifically the focus on null-treatment recidivism and reporting, many items were new to this questionnaire.

Also, in order to maintain consistency with this and many other reported studies, the measurement tool for violent incidents was a slightly modified version of the Revised Conflict Tactics Scale, or CTS2. The CTS2 is a recent revision of the Conflict Tactics Scale (CTS1) that was used extensively in the field of spouse abuse research for the last 15 years (Straus et al., 1996, 1993b; Schafer,

1996; Gelles & Straus, 1988). The questionnaire used the complete psychological aggression (preliminary $\alpha=.79$) and physical assault (preliminary $\alpha=.86$) subscales of the CTS2. It also included the complete injury scale, except that items 55 and 23 were combined (preliminary $\alpha=.95$). The Cronbach alphas listed for each scale are from the initial psychometric evaluation of this scale using a sample of college students (Straus et al., 1996). They are noted as preliminary because some items in the scale were changed slightly based on this research and it is this revised edition that was published by Straus et al. This published, revised edition was the version used in the present research, with the modifications noted in the following paragraph.

The form of this scale used in the present research only included 2 items from the negotiation scale. It was also put back in the hierarchical order of the CTS1 in which the tactics become less socially acceptable the further the respondent goes in the survey (the CTS2 is in random order). This was necessary because the survey asks respondents who answered yes to any of the questions in the physical assault scale to give further information. In an

ordered form, this is easily done by asking respondents if they have answered "never" to all questions in a certain range. One other modification was made in the CTS2. One of the frequent complaints about the CTS1 was that it failed to capture the reason for and results of assaults on a partner (Schaefer, 1995; Yllö, 1993). The CTS2 solves the second of these objections. The modification used in this survey was an attempt to improve the first issue. For each tactic on the CTS2 physical assault scale, the respondent was first asked if they have ever "used this tactic", and then asked if their partner has ever used it. Two more parts were appended to these items. The first of these asks how many of the total times that the respondent used these tactics was the use only in self-defense. The second of these additions asks the same thing for the partner.

Also, another item was borrowed from a previous study by Paquin (1994). This item asks the respondent about their awareness of violence occurring in the relationships of their friends or neighbors, and is used in a modified form in this survey.

Reliability and Validity

Reliability

Method error was addressed primarily by pre-testing the survey with 5 military spouses and counselors.

In addition, questions on the instrument have been drawn, as much as possible, from tools with established reliability, as noted above. Psychometric tests will be performed on the CTS2 data, which was a prerequisite for gaining permission to use this scale. A copy of the use agreement is provided at Appendix H. Also, similar questions on the two reporting sections of the survey will be compared. For instance, question #9 on page 1 asks the respondent how the possibility of their partner being arrested affects their decision to report. Question #31 on page 2 asks about the respondent's likelihood of reporting if their partner's career was protected, and question #33 on that page asks about the respondent's likelihood of reporting if the offender's career was protected, but they were arrested. Obviously, if the answers to these questions are reliable, those who say that the possibility of their partner being arrested greatly affects their decision to

report should usually respond with an different likelihood of reporting (direction being based on the direction of the effect reported in question #9) when answering the question #31/33 pair. This is not an exact test-retest check, but a low correlation here would suggest a reliability problem.

Threats to Validity

A major threat to validity in this project is the measurement of the likelihood to report. Since it is not an experimental measure, there is some doubt as to how measuring self-reported likelihood to report would relate to measuring actual likelihood of reporting. Therefore, the measurements of differences in the likelihood of reporting will likely result in only roughly representative numbers. However, these rough numbers should be sufficient to evaluate the relative strength and direction of the relative effects of the different response options.

There will also likely be some non-returned survey bias. It seems likely that spouses who are very afraid of their abusers or who are abusers themselves will be less likely to return this type of survey. This has been addressed by using a totally anonymous surveying design,

which should increase the number of these people who will
answer the survey. This bias will tend to underestimate
the problem, and will probably drive some overestimation of
the current likelihood of reporting. (It is argued that
someone who is too afraid to fill out an anonymous survey
would probably be very unlikely to officially report
abuse.)

When surveying about such a sensitive and emotionally
charged topic, a bias toward socially acceptable reporting
is expected. That is, abusers and victims alike will
likely underestimate abuse. This may affect measures of
abuse, but reporting behavior data is unlikely to be
significantly affected.

Military members take a good number of surveys, and
they are quite cynical about statements of confidentiality.
Often the demographic data alone can identify an
individual. For instance, almost all military surveys ask
for rank, age bracket, and unit. This is often sufficient
to identify many military members. For this reason,
conspicuous measures have been used to assure anonymity and
the survey requests "clumped" demographic data (instead of
asking for rank, it asks for a broad range of ranks) and

does not ask for items not theoretically correlated with abuse or reporting, such as unit. Although these measures may decrease the effects of this bias, some amount of it is likely to remain. This also will tend to cause the results to underestimate the severity of the problem, but again reporting data is unlikely to be significantly affected.

There is also the possibility that respondents who have not experienced abuse may not feel it is important to return the survey, since they do not see how the information they provide is pertinent. This has been addressed by specifically targeting this group in the follow-up letters.

Another threat to validity in this study is that only one member of the couple is being surveyed. Although this is the way these studies are usually done (Bohannon, Dosser, & Lindley, 1995; Gelles & Straus, 1988), some research has indicated that when violence is measured by events reported by either spouse, the result is as much as 50% higher than when the reports of only one spouse are used (Bohannon et al., 1995; Szinovacz, 1983). Straus and Gelles (1990) attribute this to the effects caused by both memory lapse, and by the effects of concealing abuse, when

the abuser is the respondent. Also, it is likely possible that some of this affect is caused by the fact that the spouses may categorize an event differently. For instance, one spouse may report an incident as a hit, while the other may record it as a slap. When the technique of using the highest report in each tactic category is used, this results in this incident being counted twice. Also, it is not unlikely that partners will remember the numbers in each category differently, especially when being asked about a sizable length of time, such as a year. Using the highest number reported in each category automatically resolves these discrepancies with the highest possible estimation in each category. There is no reason to believe that this highest estimation is the most correct one. Despite these mitigating arguments as to the real strengths of using these "highest reports", it does seem likely from these studies that only questioning one member of the couple, like the other effects mentioned, may result in slight underestimation of the occurrence of domestic violence. Again, it should not affect the reporting or the time to recidivism measure (although it might affect the chronicity recidivism measure somewhat).

In this survey, the spouse is asked to report on their partner's use or abuse of alcohol. Research done by Linquist et al. (1997) suggests that such reports can be considered valid.

Also, the fact that the sample has been picked only from families living in the United States is expected to have only a small effect, since the mobility of military members and their families makes their current location less of an important factor than it might be in a civilian sample. Also, this prevents underestimating family violence due to artificial effects such as forced long-term family separation due to overseas assignments, as was mentioned in the section on sampling above.

Construct validity is being maximized by using items that have been used and evaluated in other research as much as possible, and by adhering closely to conceptualizations that have been reported previously in the literature.

Overall, threats to validity may tend to cause this study to underestimate the abuse problem and to overestimate the current likelihood of official reporting, although the difference in reporting options will likely be valid, at least in direction and in relative size of the

intervention option's effect. These threats may also cause underestimation of the recidivism measures, although it is expected that any significant effect here will affect both the null and official recidivism measures similarly (even when compared to other studies). A differential effect would be the only major concern here.

CHAPTER IV

DATA ANALYSIS

This chapter details the data analysis procedures used to assess the research hypotheses and reports the results of those analyses. Further discussion as to the interpretation and application of these results is reserved for Chapter 5. As a standard throughout this research, results will be considered and reported as statistically significant if the significance value for the related test was below .05. In most cases, the exact significance value will be given. Of course, this should provide 95% confidence for each finding. However, in this research, numerous tests are performed on this data. Since, for the most part, each of these tests is independent of the other, on the average, false-positive test results with $p < .05$ can be expected for one in every twenty tests. Since well over twenty statistical tests are performed in this section, this is an important caveat.

Survey Response

Of the 910 surveys mailed in August, twenty-six were returned by the post office because the forwarding order had expired, but with a forwarding address provided. Second packages were sent to these twenty-six respondents at these new addresses. A total of 67 packages were returned by the post office with no forwarding address. Therefore, the maximum number contacted by the survey was 843. Of this 843 who received surveys, 261 were returned. Of these 261, six were unusable, resulting in a final sample size of 255. This equates to a usable survey response rate of 30.2%. These results are depicted in the accompanying table. Incidentally, the response rate for the surveys which included the Wendy's coupons was 35%.

The sample size (n=255) attained is insufficient to give 95% confidence in all results within a ±5% margin of error. For the obtained sample size, we

Table 4

Survey Response Rates

1st Survey Mailout	910
Returns with no forwarding address	67
Total packages received by respondents	843
Total Responses Received	261
Unusable Surveys	6
Final Sample Size	255
Usable Survey Return Rate	30.2%

can be 95% confident that the actual percentages fall within ±6.1% percentage points.

In order to evaluate survey return bias and further assess generalizeability back to the Air Force population it was drawn from, key demographics of the resulting sample were compared to the profile of all married Air Force members stationed in the United States (Potter, 1997; Air Force Personnel Center, 1996). The results are shown below.

Table 5
Demographic Profile of Final Sample

Race	USAF	Sample		Age	USAF	Sample
				19-20	2.0%	1.0%
Hispanic	4.2%	3.9%		21-22	5.6%	2.9%
White	81.5%	86.9%		23-24	7.4%	5.2%
Black	8.6%	6.8%		25-26	8.3%	9.0%
Other	5.7%	2.4%		27-29	12.9%	11.4%
				30-32	13.5%	12.4%
				33-36	21.0%	23.3%
Education Level				37-40	17.0%	21.9%
	USAF	Sample		41-44	8.7%	8.6%
Hold advanced degree	15.5%	23.5%		45-49	3.1%	4.3%
Four year college graduate or more	12.8%	16.4%		50-	0.5%	0.0%
Associate degree	13.3%	13.9%		**Military Ranks**		
Some college	50.5%	27.1%			USAF	Sample
High school	7.9%	19.1%		E1-E4	26.6%	14.3%
				E5-E6	36.2%	34.3%
Note: Ranks are Defined in Abbreviations Section.				E7-E9	14.5%	18.6%
				O1-O3	12.5%	14.3%
				O4-O6	10.2%	18.1%

Table 6

Demographic Profile of Final Sample (continued)

Religion	USAF	Sample		Gender	USAF	Sample
Catholic	26.9%	22.6%		Male	85.5%	96.6%
Jewish	0.3%	0.0%		Female	14.5%	3.4%
Protestant	43.1%	53.4%				
Muslim	0.0%	0.0%		**Number of Children**	USAF	Sample
Buddhist	0.0%	0.0%				
Atheist	0.0%	0.0%		None	41.7%	24.2%
Other	13.2%	12.8%		One	20.7%	22.5%
None	16.5%	11.3%		Two	25.6%	36.0%
				Three	9.6%	11.4%
				Four or more	2.5%	5.9%

Domestic Violence Incidence Rates

The domestic violence incidence rates were measured as the percent of the couples that had experienced each type of violence. These rates were first computed using only the raw CTS2 data (ignoring the self-defense answers) for occurrences in the last 12 months, so that they could be compared to other studies, such as the 1985 National Family Violence Survey (NFVS) and the 1995 Air Force Needs Assessment Survey.

The NFVS data is for a nationally representative population and presents a comparison of the USAF sample in

this study and the rest of the nation, while the Needs

Assessment provides incidence figures for a worldwide

sample of USAF members (n=22,965). However, the Needs

Assessment survey is unlikely to be viewed as anonymous by

service members, and did not contain the CTS items for

"beat him/her up", choking, or use of a knife or gun.

Despite these differences, convergence would be

expected between this study and the Needs Assessment Survey

in minor violence rates, while some differences in severe

violence results would be expected because of the different

forms of the CTS used and the anonymity differences. This

is exactly what occurs, as seen in the chart on the

following page. In each of the charts on the following

page, an asterisk represents an area in which insufficient

data existed to report a result. Also, margins of error

are 95% confidence intervals for the proportions or

percentages listed.

Table 7

Prevalence of Violence in the Last 12 Months

	This Study	1985 NFVS	1995 Needs Assessment	Approx margin of error
Any violence	17.9%	16.1%		±4.7%
Violence by the USAF member	15.1%		14.7%	±4.4%
Husband to wife violence	15.3%	11.6%	11.1%	±4.3%
Wife to husband violence	*	12.4%	11.5%	*
Violence by the spouse/respondent	15.1%		16.8%	±4.4%
Husband to wife violence	*	11.6%		*
Wife to husband violence	14.8%	12.4%		±4.3%
Any serious abuse	6.0%	6.3%		±2.9%
Serious abuse by the USAF member	4.4%			±2.5%
Husband to wife severe abuse	4.7%	3.4%	2.2%	±2.5%
Wife to husband severe abuse	*	4.8%	9.0%	*
Serious abuse by the spouse	3.2%			±2.2%
Husband to wife severe abuse	*	3.4%		*
Wife to husband severe abuse	3.4%	4.8%		±2.2%

As expected, the rates of minor violence were slightly
higher in this study's sample than in the nationally
representative NFVS survey. However, these observed
differences, while consistent, were within the margin of
error of this study and hence cannot be considered
statistically significant. Also, as expected, the incidence
rates found in this study matched those of the Needs
Assessment Survey within the margins of error for the study.
In several cases, most obviously in the husband to wife
serious abuse rate, the Needs Assessment Survey reported
somewhat lower incidence rates. This seems logical

considering the hypothesized perceived lack of anonymity of the Needs Assessment Survey. However, again these differences were within the margin of error of this study.

As mentioned earlier, this questionnaire included the option of classifying certain instances of partner violence as self-defense. The next two charts report the incidence rates from this study and their corresponding values when adjusted to remove tactics reportedly used in self-defense.

The first chart reports the rates for the 12-month period preceding the survey administration. The second chart reports incidence rates for the duration of the couple's relationship.

Table 8
Twelve Month Prevalence Rates Adjusted for Self-Defense

	Normal CTS2 Prevalence Rate	Adjusted for Self-Defense	Margin of error
Any violence	17.9%		±4.7%
Violence by the USAF member	15.1%	13.3%	±4.4%
Husband to wife violence	15.3%	13.7%	±4.3%
Wife to husband violence	*	*	*
Violence by the spouse/respondent	15.1%	13.3%	±4.4%
Husband to wife violence	*	*	*
Wife to husband violence	14.8%	13.7%	±4.3%
Any serious abuse	6.0%		±2.9%
Serious abuse by the USAF member	4.4%	3.6%	±2.5%
Husband to wife severe abuse	4.7%	3.8%	±2.5%
Wife to husband severe abuse	*	*	*
Serious abuse by the spouse	3.2%	2.8%	±2.2%
Husband to wife violence	*	*	*
Wife to husband violence	3.4%	3.0%	±2.2%

Table 9

Prevalence of Violence over the Entire Relationship

	Normal CTS2 Prevalence Rate	Adjusted for Self- Defense	Margin of error
Any violence	30.0%		±5.7%
Violence by the USAF member	23.5%	20.9%	±5.2%
Husband to wife violence	23.7%	20.9%	±5.1%
Wife to husband violence	*	*	*
Violence by the spouse/respondent	25.5%	24.2%	±5.4%
Husband to wife violence	*	*	*
Wife to husband violence	25.4%	24.5%	±5.3%
Any serious abuse	12.7%		±4.1%
Serious abuse by the USAF member	10.0%	9.2%[a]	±3.7%
Husband to wife violence	11.0%	9.8%[b]	±3.8%
Wife to husband violence	*	*	*
Serious abuse by the spouse/respondent	6.4%	4.8%[a]	±3.0%
Husband to wife violence	*	*	*
Wife to husband violence	6.7%	5.1%[b]	±3.0%

[a, b] – when considered by couple, the differences between men and women (and, hence, USAF members and spouses) were significant at p=.028 (Using Wilcoxon Signed Ranks Test)

As can be seen from the chart, eliminating uses of physical tactics delineated as self-defense does not seem to move many offenders into the non-violent realm. Perhaps most significantly, there does not seem to be a huge difference between men and women in the use of physical tactics in self-defense across most of the categories. However, self-defense did seem to play a significant role in female spouse use of serious abuse tactics in the duration of the relationship figures. Although the

confidence interval for the incident rate results was too

large to detect significance using these, a different

analysis proved more discriminating. Considering couples

as related samples, a Wilcoxon Signed Rank Test confirmed a

significant difference in the number of uses of serious

abuse tactics when self-defense uses are considered

(p=.028). The significance of this relationship was

confirmed using dichotomous coding for the occurrence or

non-occurrence of violence using the McNemar test (p=.043).

The next incidence rate that was evaluated was the

injury rate from the CTS2. The results of this analysis

are reported below. There was not sufficient data to make

Table 10

Prevalence of injury in the last 12 months

	Injury Rate	Margin of error
Any injury	6.5%	±3.1%
Injury caused by the USAF member	5.7%[a]	±2.9%
Husband caused injury	6.0%[b]	±2.9%
Wife caused injury	*	*
Injury caused by the respondent	2.0%[a]	±1.7%
Husband caused injury	*	*
Wife caused injury	2.1%[b]	±1.7%
Any Serious Injury	0.8%	±1.1%

[a, b] – when considered by couple, the differences between men and women were significant at p=.003 using Wilcoxon Signed Ranks Test)

a comparison of the differential affects of gender on the
serious injury measure, so only the overall prevalence is
reported for this category.

Table 11

Prevalence of Injury over the Duration of the Relationship

	Injury Rate	Margin of error
Any injury	10.2%	±3.7%
Injury caused by the USAF member	8.9%[a]	±3.5%
Husband caused injury	9.4%[b]	±3.5%
Wife caused injury	*	*
Injury caused by the spouse/respondent	4.1%[a]	±2.4%
Husband caused injury	*	*
Wife caused injury	4.3%[b]	±2.4%
Any serious injury	2.0%	±1.7%

[a, b] – when considered by couple, the differences between
men and women were significant at p=.008 (Using
McNemar's Test)

As can be seen from these charts, violent acts do seem
to result in injury more often when perpetrated by the
husband. Again, although the margin of error for the
incidence rates is too large to simply observe statistical
significance from the percentages reported in the charts,
another non-parametric evaluation of the results by couple
does show significance. As previously done above, using
couples as paired data, Wilcoxon Signed Ranks and McNemar's
Tests were preformed, yielding the statistically

significant results reported in the notes at the bottom of each chart.

In assessing physical injury in the past 12 months, if numbers of injury measures reported are evaluated, a Wilcoxon Signed Ranks Test gives a significance value of p=.003. If the variables are re-coded to make them dichotomous measures of whether or not injury has occurred, McNemar's test reports p=.022. A similar McNemar analysis for physical injury over the course of the relationship gives a significance of p=.008.

Logistic Regression Analysis

Logistic Regression Models were also created for any violence in the past year and for serious abuse in the past year. The model for any violence found acceptance of slapping, partner's age, involvement with other spouses, household income, and the frequency of the partner becoming drunk all to aid in the prediction of violence. With these variables in the model, over 30% of the variance was accounted for and 91% of the cases in the sample were correctly predicted. The chi-square test of the change in

log likelihood was significant at p=.0001. The complete results of this test are in Appendix I.

The model for serious abuse found only three variables to be substantially helpful in predicting this occurrence. However, these three variables, use of violence by the respondent (not in self-defense), frequency of the partner becoming drunk, and partner age together predicted five of the eight incidences of serious abuse in which the partner was the victim while not incorrectly predicting any non-serious abuse cases to be serious abuse (out of 236). The Cox and Snell R^2 reported that this model explained 18% of the variance in serious abuse as a victim (the Nagekerke R^2 was .717). The chi-square for this model showed p=.0015. The complete results of this test are also in Appendix I.

Treatment and Null-Treatment Recidivism

In hypothesis #1, it was posited that official reporting would increase time to recidivism and decrease the percentage of recidivists, when compared to offenders who receive no treatment because they were not reported. As expected, very few in the sample had reported domestic violence to an official agency. Because of this, data from

the other studies mentioned in Chapter 2 will be used to

supplement the data collected in this study in testing this

hypothesis. The first part of this hypothesis, that time

to recidivism is increased in couples who report, cannot be

adequately tested due to the small reporting subgroup.

The cross-tabulation for this relationship is shown

below. As is easily seen, if any relationship exists in

Table 12

Time to Recidivism vs. Reporting

			Was first incident reported		
			Not Reported	Reported	Total
Time to Recidivism	Less than 12 months	Count	11	3	14
		Expected Count	12.3	1.8	14.0
	1 to 2 years	Count	7	0	7
		Expected Count	6.1	.9	7.0
	3 to 4 years	Count	3	0	3
		Expected Count	2.6	.4	3.0
Total		Count	21	3	24
		Expected Count	21.0	3.0	24.0

this sample, it seems that the relationship is the reverse

of that expected in this hypothesis. This may be due to

the fact that all but one of these reporting respondents

had experienced serious and repeated abuse, so some
selection bias may be present.

One interesting piece of data from this analysis is that
no respondents answered that their spouse had recidivated
after a 4 year reprieve. All of the recidivists seemed to
recidivate within a 48-month window. However, use of any
smaller window than 4 years begins to eliminate couples that
reported subsequent violence (see histogram below).

Figure 3
Histogram of Time to Recidivism

Histogram of Time to Recidivism
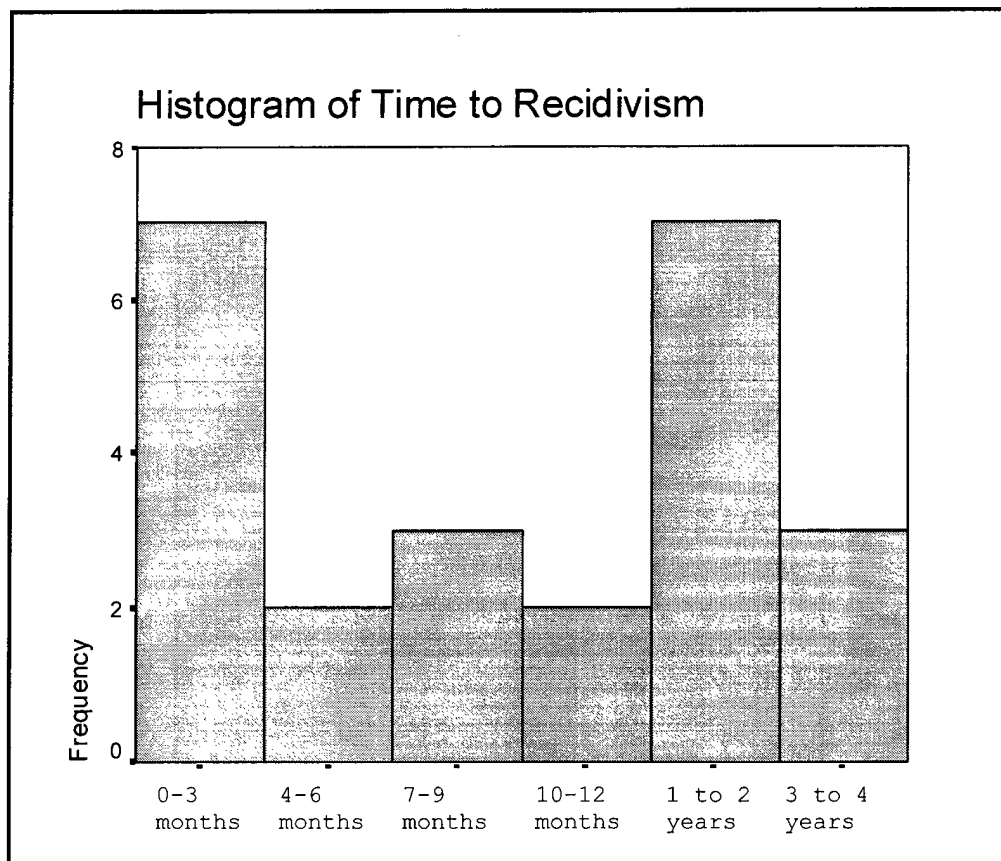
This matches the data on a three year study of officially re-reported recidivism in the military which found that 14% of offenders recidivated within three years. Of these, 29% were reported the first year, 35% the second year, and 36% the third year. The discussion of the implication of this finding for recidivism measures and studies will be rejoined in the discussion chapter.

Interestingly, these rates of recidivism for reported offenders do reflect a longer time to recidivism than the group of non-reported offenders from this study. However, these studies used completely different methodologies and are not directly comparable in this manner.

The analysis of the second part of this hypothesis, that the percent of recidivists in the first year will be lower among those who are reported is similarly difficult to assess because of the lack of reporting data (see Table 11 on the following page). However, a similar result is found as was discovered in assessing the first part of this hypothesis. All of the reported offenders who recidivated did so within the first 12 months, while only 52% of the

non-reported recidivists perpetrated violence again in this
period. The amount of data on reported offenders is not

Table 13

Number of First Year Recidivists vs. Official Reporting

| | | | Was the first incident reported | | |
			Not Reported	Reported	Total
Time till Recidivm	12 months	Count	11	3	14
		Expected Count	12.3	1.8	14.0
	Over 12 months	Count	10	0	10
		Expected Count	8.8	1.3	10.0
Total		Count	21	3	24
		Expected Count	21.0	3.0	24.0

sufficient for statistical analysis. Again, an extremely
tentative comparison can be made to the Caliber data. In
the Caliber recidivism study, 29% of the identified
offenders who recidivated did so in the first year, which
is well below the 52% in this study's group of unreported
offenders. However, due to methodological differences, no
definite conclusions can be drawn from this comparison.

The other recidivism measure addressed this study was
null-treatment recidivism, which will be used in testing a
subsequent hypothesis. In calculating this recidivism rate,

all cases in which the first incident had occurred less than 12 months earlier were eliminated, since the offenders in these cases had not had ample opportunity to recidivate. Also, all couples whose first offense occurred over 10 years ago were eliminated. This was to ensure that a picture of the best current null-treatment rate was obtained, as perceptions of family violence, and hence the numbers of repeat offenders may have changed some over time. Also, it was originally thought that extending the period past 10 years might hurt validity due to lack of memory accuracy. (Although this restriction was followed, the data from this study showed a rate without the 10 year restriction that was within 2% of the rate with the restriction.)

With these restrictions, 63% of military members who had perpetrated an initial incidence of violence recidivated before the current study. Unfortunately, if anything, this rate is a minimum rate since only instances in which the military member used the first tactic in a second incident were counted, and since there were likely those included in this analysis who will recidivate, but

have not yet (such as those whose first offense was only 12-24 months ago).

Victim Reporting

Self-reported victim likelihood of notifying an official agency of abuse (reporting) was measured on nine option scale from 0% (would not report) to 100% (would definitely report) for each of 14 hypothetical situations. The hypotheses on reporting divide these options into five categories: availability of educational material, victim control, protection from harmful effects, long term follow-up, and Caliber disincentive removal.

However, before these can be analyzed, the reliability and validity of the self-reported likelihood scores must be assessed.

As a first step, a reliability analysis was run on the whole set of answers. The Cronbach Alpha for the entire group was .978. The lowest item-total correlation was .738. A separate reliability analysis was run including only those questions that were designed to measure the effects of victim empowerment. These four questions yielded an alpha of .92.

The next step was to compare the internal consistency of responses as mentioned in Chapter 2.

To do this, the correspondence between question #9 (which asked about the effect of arrest on the respondent's likelihood of reporting) was compared to the actual change in reporting likelihood between questions 31 and 33. In question 33, arrest is added to the hypothetical situation posed in question 31. The results are shown in Table 14 below.

Table 14

**Respondents' Estimations of the Effect of Arrest
on Their Decisions vs Actual Change in Reporting
Likelihood Measure in a Later Question**

| | | | Respondent's estimation of the effect of arrest on reporting likelihood (#9) | | | |
			Less Likely	No effect	More Likely	Total
Change in likelihood of reporting measure when arrest is added to the hypothetical situation	Decrease	Count	41	26	19	86
		Expected Count	29.1	40.1	16.8	86.0
	Same	Count	18	58	17	93
		Expected Count	31.5	43.4	18.1	93.0
	Increase	Count	7	7	2	16
		Expected Count	5.4	7.5	3.1	16.0
Total		Count	66	91	38	195
		Expected Count	66.0	91.0	38.0	195.0

A chi-square test for independence of this relationship found X^2=21.8 (p<.001). Thus, this internal consistency

check seems to support the use of these self-reported

likelihoods, at least to determine the presence of an effect

on reporting and a direction of that effect.

The next check on this measure was to evaluate the

validity of these responses. The technique used to do this

was to compare the frequency of official reporting as self-

reported to actual reporting behaviors found in this and

other studies. As mentioned above, the best guess from

previous Air Force research is that about 8% of the

incidents that occur are reported and substantiated. The

report rate in the present research confirms this. Of the

59 couples that had ever had an incident in which the USAF

member had used a physical tactic, only five respondents

said they had reported this first incident (8.5%).

To relate this figure to the measurement of reporting

likelihood in this study, the "likelihood of reporting now"

measure was tabulated for respondents who have never

experienced violence. Since first event reporting is this

study's primary focus, the group who had experienced

violence was eliminated from the following analysis, as

their answers would have reflected 2nd or subsequent

incident reporting likelihood. With this done, 45% of

respondents reported a present likelihood of reporting of 60% or greater. Clearly, the respondents seem to overestimate the likelihood of their reporting.

To handle this overestimation of reporting, several corrective methods were used. First, two "cut-offs" for reporting will be considered in each case. First, anyone who reported 60% (Probably) or higher on the scale will be considered a reporter and all 50% or lower scores will be considered non-reporters. A second criteria will require a score of 90% (Very Likely) or 100% (Would Definitely) to be considered a report.

One of the possible explanations for this overestimation is that most of these respondents are in a couple that will never face such a decision. To correct for this effect and to create a better picture of reporting likelihood in couples who are at risk, two adjustments were made. First, the data from this study showed that over 96% of the couples who ever experience violence in their relationship experience their first incident prior to 10 years of marriage. This is shown in the histogram on the following page.

Figure 4

**Histogram of Time until the First Physical Incident
in the Relationship**

Histogram of Time Until First Physical Incident
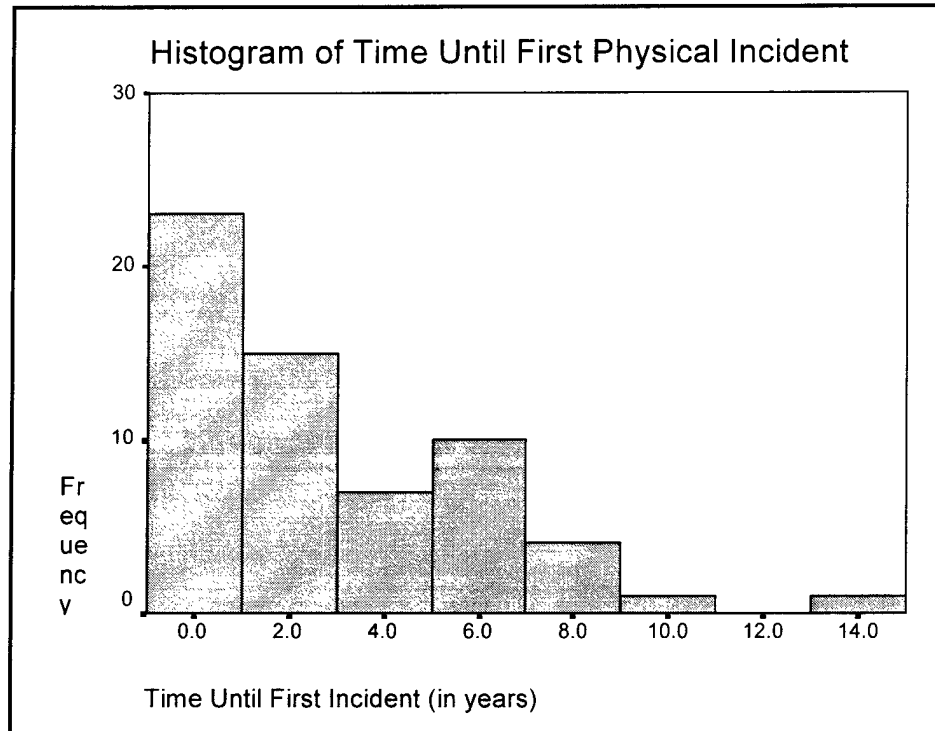
For this reason, all couples who had been violence-free

for over 10 years were considered low risk and removed from

consideration in the reporting analysis. Secondly, using the

logistic regression model discussed earlier for violence in

the past year, probabilities of violence were computed for

each couple. Members of the sample remaining after the two

cuts discussed above were then weighted by these

probabilities to give more emphasis to the answers of at-risk

respondents. The weights were multiplied by a constant to

create the same n-value as existed before weighting.

Each of the adjustment criteria used were also evaluated for a statistically significant correlation to likelihood of reporting to ensure these adjustments were meaningful.

Table 15

Tests for Significance of Reporting Adjustment Criteria

	Significance Values for Adjustment			
	Prior Violence	Time as Partners	Violence & Time as Partners	Regression Probabilities
Likelihood to report now		.045	.001	.003
Educational Material		.020	.023	.006
Case worker for 1 year	.031	.029	.007	.002
Control over length of separation	.013	.013	.028	.001
Ability to mandate counseling	.014		.032	.000
Ability to "suspend" sentence	.014		.034	.061
No career affecting actions for first (minor) offense	.008	.002	.048	.034
All previous options together	.025			.056
Partner arrested, but no career actions		.025		.025
Partner arrested & all previous options		.007	.040	.000
Ability to make arrest decision		.040	.050	.001
Only commander and case-worker notififed	.015			.000
Partner given no-alcohol order	.015		.030	.002
Off-base agency/complete privacy	.050	.008	.001	.000

* Significance values for the first three categories are Eta values with likelihood as the dependent variable. The values for the fourth category are 2-tailed p-values based on Pearson product moment correlation coefficient calculations. 1-tailed values above .05 are omitted.

Each criterion showed significant correlations in at least 9 of the 14 likelihood options to be discussed below.

For each option discussed below, all four likelihoods will be reported. First, the raw responses from all couples (including couples with violence) in the study will be reported. Second, the results will be reported for all couples who had not experienced violence. Third, the scores for those without violence and with less than 10 years together will be reported. Finally, the results calculated using the adjusted and weighted sample will be shown.

The reason for reporting all of the scores is primarily because the elimination of all violent couples and couples who have been together over 10 years leaves only 81 couples. This allows smaller subgroups of scores within this group to possibly skew this group's overall score (especially in the weighted sample, in which some cases have several times the leverage of others). Also, because of the decreased sample size in these subgroup analyses, the power of tests for statistical significance is reduced. This lack of power may result in an increased incidence of Type II error. Thus, the larger groups' scores will put the smaller subgroups'

results into perspective and will prevent any anomalies

resulting from giving such increased weight to such a few

cases from going unnoticed. Respondents who may have

actually had violence in their relationship but who answered

as if they did not would be of special concern here. The

respondents, if they exist, would have not been eliminated

by the violence cut and would hence be part of the smaller

sample. If the logistic regression model is a good

predictor of violence, it is likely that these couples would

be very heavily weighted. Since these hypothetical

respondents did not even report honestly on an anonymous

survey, they are probably on the very extreme end of the

official reporting spectrum when compared to those who

answered honestly. Although there is no real way to assess

this possibility, a scatterplot of the weights assigned to

the smaller sample is helpful to get a picture of the

overall result of the weighting scheme. This is shown on the

following page in Figure 5.

Figure 5

Scatterplot of Weights Assigned to Adjusted Sub-sample
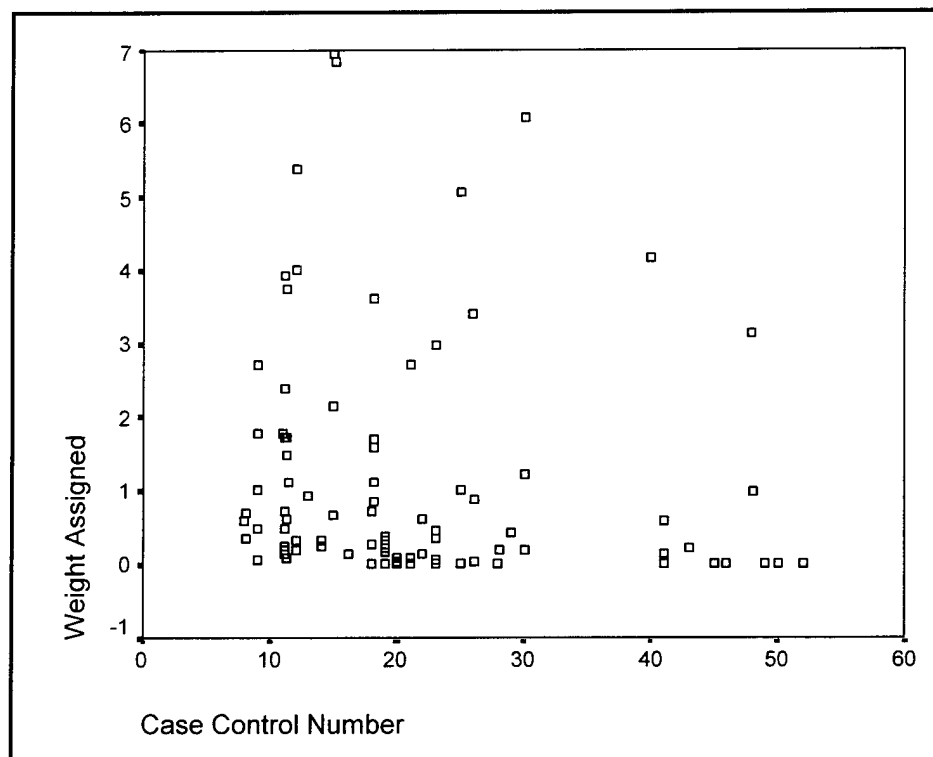
As can be seen above, five cases carry substantially more weight than the other cases. To keep these cases from having an inordinate effect on this subgroup's scores, each of these weights above 4.5 were adjusted to equal 4.5.

Although it is less stable because of the weighting and the small sample size, reporting the adjusted sub-sample figures serves two purposes. First, it has been created to best predict the reporting of those who are most likely to experience domestic violence. Second, it tends to give the

most conservative estimate of the change in reporting due to each intervention option. However, because of the loss of power and the instability involved in the weighted sub-sample and the unweighted, "established", non-violent subgroup, hypothesis testing will be done using the results from the entire sample and from the non-violent subgroup. A hypothesis will be confirmed if both of these groups report statistically significant differences both in 1) the percentage reporting at both 60% and 90% cut-off levels and 2) in the respondents' reporting likelihood mean scores under the current option, as compared to the baseline introduced below. The results from the other two groups will be used to assess the strength of the effect and to temper the conclusions drawn from acceptance of the hypothesis.

The basis for comparison for each of these figures will be the baseline that was established at the beginning of the reporting section of the survey by asking the respondent their likelihood of reporting with things as they are now. Since it was previously determined that respondents seem to have overestimated their likelihood of reporting based on official reporting statistics, a direct reliance on the additive difference in reporting percentages would clearly be

misleading. Therefore, each analysis will measure the effect

of the intervention as a multiplicative factor of the

baseline score. The validity of the resulting figures will

be discussed in the next chapter. First, key reporting

calculations will be figured for the baseline figure. The

results of these are listed in Table 16 below.

Table 16

Likelihood of Reporting Now

	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	37.9%	44.4%	45.3%	42.9%
Percent "Reporting" at 90% Cut-off	22.8%	25.9%	28.4%	27.2%
		Mean Scores		
Mean Reporting Score	48.2	52.8	54.1	50.1
Standard Deviation	34.9	33.4	34.0	33.8

In this data, the same effects are seen across the

different adjustments that would be expected from the check

of these adjustments above. Violent couples are less likely

to report, while "established" couples seem more likely. The

sample weighted by the "at risk" factor seems, like the

actually violent couples, less likely to report.

With that basis, the first reporting hypothesis to be considered stated that reporting would be greater if educational material was available on what the victim could expect if he or she reported. This was addressed by asking for the likelihood of reporting if the respondent had this material. The results are shown in Tables 17 and 18.

Table 17

Net Effect of Educational Material on Reporting Likelihoods

	Net Effect of Intervention Option		
		Violent and "established"	Violent Couples	Raw
	Adjusted	couples omitted	Omitted	Data
Percent "Reporting" at 60% Cut-off	50.1%	60.0%	61.7%	61.2%
Additive Increase from Baseline	12.2%	15.6%	16.5%	18.3%
Factor of Increase From Baseline	1.32	1.35	1.36	1.43
Significance of Change		.004	.000	.000
Percent "Reporting" at 90% Cut-off	26.3%	33.8%	34.2%	32.8%
Additive Increase from Baseline	3.5%	7.8%	5.8%	5.6%
Factor of Increase From Baseline	1.15	1.30	1.21	1.21
Significance of Change		.070	.021	.008

Table 17 above shows the net effect of this intervention on the count of people whose likelihood score predicted reporting. The reporting rates and additive and multiplicative increases from the baseline are given for each group. A level of significance for the change in reporting is also given. This is a significance level from a McNemar test. This test examines the number of people whose "decisions" (as defined by the cut-off) about

reporting change between the current and baseline intervention. For higher numbers of changes, this test uses a chi-square type analysis. For low numbers of changes, it uses the binomial distribution.

Table 18

Reporting Likelihoods with Educational Material

	Differences in Self-Reported Likelihoods			
Mean Difference in Reporting Score from Baseline	10.7	10.9	9.2	10.8
Significance of Difference in Reporting Scores (paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	20.8	20.5	18.3	20.1
Lower Bound of Confidence Interval for Difference in Scores from Baseline	6.2	6.3	6.2	8.1

The second half of the educational material is shown in Table 18. Here, the effects of the option on the respondents' actual self-reported likelihood scores are shown. The mean and standard deviation of the increase are given. Also, the statistical significance of this difference from the baseline is given (produced from a paired T-test). Finally, the lower bound of the confidence interval for this difference is given. In subsequent analyses of other reporting interventions, these two result tables will often be combined.

Educational material had a small positive effect on the reporting scores and percentage of reporters for all groups, except that this change was not significant for the smaller, non-violent, established group at the 90% cut-off. The change in reporting likelihood score and in overall decisions to report (at 60% and 90% cut-off) were significant for the total sample and for the non-violent subgroup. Therefore, the stated criteria for confirming this hypothesis were met. However, the weakness of this effect is clear from the results in the two smaller groups.

One additional facet of this area was also examined in this study. Since the reporting question above presumed the respondent had the material, another question addressed one possible means of getting that information to the respondent.

When asked how likely they were to pick up such information if it was available at a public, frequently traveled (Commissary, base exchange) area and at a private location (Family Advocacy, Family Support), just over 50% responded that they would definitely or probably pick up the information, and 25.2% reported that they would not.

The next hypothesis in this group was that likelihood of reporting would be greater when the victim had some control over the ensuing process. This was addressed in four measures, each covering control over a different part of the intervention process. These areas were: ability to decide the time of mandatory separation (between 5 hours and 3 days), the ability to mandate counseling as part of the treatment and sanction process, the ability to "suspend" any sentence involving pay or rank reduction (no such sanction applied unless a second offense occurs), and control over the arrest decision (in minor cases where probable cause existed).

The results for these four measures are reported in the tables on the following pages. The first measure examined will be victim control over the period of mandatory separation.

Table 19

**Reporting Likelihood Results with Victim Control over
Length of Separation (Between 5 Hours and 30 Days)**

	Net Effect of Intervention Option			
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	43.8%	51.9%	55.1%	52.7%
Additive Increase from Baseline	5.9%	7.5%	9.8%	9.8%
Factor of Increase From Baseline	1.16	1.17	1.22	1.23
Significance of Change		.307	.074	.001
Percent "Reporting" at 90% Cut-off	20.4%	26.6%	29.9%	30.2%
Additive Increase from Baseline	-2.4%	0.7%	1.6%	3.0%
Factor of Increase From Baseline	0.89	1.03	1.05	1.11
Significance of Change		.999	.804	.170
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	6.6	9.6	8.5	11.1
Significance of Difference in Reporting Scores (from paired T-Test)	.066	.004	.000	.000
Standard Deviation of the Differences	30.9	28.4	25.0	24.7
Lower Bound of Confidence Interval for Difference in Scores from Baseline (full confidence interval shown for adjusted group since it includes zero)	13.7 to -0.46	3.2	4.4	7.8

Control over separation seemed to have a small positive effect on reporting likelihood scores. However, it did not have a significant effect on changing people's decisions to report, as measured in the top section. Thus, considered alone, this option does not meet the criteria previously established for hypotheses for confirming a positive effect on reporting.

When the victim is given the ability to mandate counseling as part of the treatment or sanction, the results are a little different, as can be seen in the table below.

Table 20

Reporting Likelihoods with Victim Able to Mandate Counseling as Part of Treatment or Sanction

| | Net Effect of Intervention Option | | | |
| | | Violent and "established" couples omitted | Violent Couples Omitted | Raw Data |
	Adjusted			
Percent "Reporting" at 60% Cut-off	74.1%	76.3%	76.5%	75.5%
Additive Increase from Baseline	36.2%	31.8%	31.2%	32.6%
Factor of Increase From Baseline	1.96	1.72	1.69	1.76
Significance of Change		.000	.000	.000
Percent "Reporting" at 90% Cut-off	39.5%	46.3%	45.0%	44.6%
Additive Increase from Baseline	16.7%	20.3%	16.6%	17.4%
Factor of Increase From Baseline	1.73	1.78	1.58	1.64
Significance of Change		.000	.000	.000
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	22.6	21.5	18.8	19.6
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	30.12	27.4	26.4	27.4
Lower Bound of Confidence Interval for Difference in Scores from Baseline	15.6	15.4	14.4	15.9

This area of victim control has significant and strong affects across all groups with a multiplicative increase

factor of around 1.7, meeting the criteria for hypothesis
acceptance.

The next area of victim control to be examined is the
victim's ability to make any rank or pay forfeiture into a
suspended sentence. A victim exercising this ability would
be able to block application of these sanctions unless a
second violation occurred.

Table 21
Reporting Likelihoods with Victim Able
to "Suspend" Pay and Rank Forfeitures

| | Net Effect of Intervention Option | | | |
| | | Violent and "established" couples omitted | Violent Couples Omitted | Raw Data |
	Adjusted			
Percent "Reporting" at 60% Cut-off	56.7%	63.6%	62.8%	62.6%
Additive Increase from Baseline	18.8%	19.2%	17.5%	19.6%
Factor of Increase From Baseline	1.50	1.43	1.39	1.46
Significance of Change		.001	.000	.000
Percent "Reporting" at 90% Cut-off	38.0%	35.1%	34.5%	34.1%
Additive Increase from Baseline	15.2%	9.1%	6.1%	6.9%
Factor of Increase From Baseline	1.67	1.35	1.22	1.25
Significance of Change		.013	.031	.004
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	22.0	17.9	13.6	15.3
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	30.86	29.7	32.5	31.0
Lower Bound of Confidence Interval for Difference in Scores from Baseline	14.9	11.1	8.2	11.1

This victim-control option had significant and moderately strong effects across all groups, meeting the acceptance criteria.

The final area of victim empowerment that was explored was the ability to control the arrest decision for the first offense, provided there was no serious injury and there was probable cause for a legal arrest.

Table 22

**Reporting Likelihood with Victim Control
Over the Arrest Decision**

| | Net Effect of Intervention Option | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	47.7%	62.0%	63.7%	61.7%
Additive Increase from Baseline	9.8%	17.6%	18.4%	18.7%
Factor of Increase From Baseline	1.26	1.40	1.41	1.44
Significance of Change		.004	.000	.000
Percent "Reporting" at 90% Cut-off	26.2%	30.4%	32.9%	30.6%
Additive Increase from Baseline	3.4%	4.5%	4.5%	3.4%
Factor of Increase From Baseline	1.15	1.17	1.16	1.12
Significance of Change		.227	.134	.151
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	12.8	13.3	11.0	12.2
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	24.2	25.1	26.0	25.6
Lower Bound of Confidence Interval for Difference in Scores from Baseline	7.4	7.7	6.7	8.8

Victim control over arrest had a weak effect on reporting likelihood score and reporting decisions at the 60% cut-off across all of the groups. However, the changes in reporting decisions at the 90% cut-off were not significant for any group, leaving this area short of the acceptance criteria.

Overall, victim control measures had a positive effect. However, the effect of control over arrest and control over the time of separation were not always significant. Overall, across these measures, the strength of this effect was inconsistent and varied depending on the part of the process over which the victim was given authority. The hypothesis that victim control would enhance reporting could only be confirmed when the victim was given control over mandating counseling or limiting the sanctions applied to the offender. This hypothesis was rejected in the case of control over arrest and time of separation.

Another area should be evaluated here as well. Question 31 proposes a situation in which no career-affecting actions can be applied for a first offense as long as the offender completes counseling and no serious injury was involved.

Although slightly different than the victim control suspended sentence option above, comparing the two allows the separation to some extent of the effect of control and the effect of nullifying these harmful sanctions.

Comparing these two options, for most of the groups there was no significant difference in the mean reported likelihoods between the two options. When such a significant difference did exist, it was in favor of the automatic protection afforded in question 31. Similarly, the reporting decision changes between question 31 and 30 were either insignificant or significant in favor of question 31, not in favor of victim control.

The next reporting hypothesis was that victim likelihood of reporting would be greater when there was a provision for long term follow-up. The option assessing this hypothesis called for case-worker follow up for 1 year after the incident.

As can be seen in Table 23 on the following page, the effects of this intervention on reporting scores are very weak in all categories and non-existent or reversed in the adjusted category. Also, the changes in reporting decisions were not statistically significant except in one

case. Therefore, the hypothesis that provisions for long-term follow-up would increase victim reporting is rejected.

Table 23
Reporting Likelihood with Case Worker Follow-up for 1 Year

	Net Effect of Intervention Option			
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	35.3%	49.4%	50.3%	50.0%
Additive Increase from Baseline	-2.6%	4.9%	5.1%	7.1%
Factor of Increase From Baseline	0.93	1.11	1.11	1.16
Significance of Change		.503	.216	.030
Percent "Reporting" at 90% Cut-off	14.8%	26.6%	31.3%	30.2%
Additive Increase from Baseline	-8.0%	0.7%	2.9%	3.0%
Factor of Increase From Baseline	0.65	1.03	1.10	1.11
Significance of Change		.999	.332	.248
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	3.0	6.2	5.1	6.5
Significance of Difference in Reporting Scores (from paired T-Test)	.335	.037	.009	.000
Standard Deviation of the Differences	27.5	22.5	23.2	23.4
Lower Bound of Confidence Interval for Difference in Scores from Baseline (full confidence interval shown for adjusted group since it includes zero)	9.2 to -3.2	0.4	1.3	3.4

The next reporting hypothesis was that victims'
likelihoods of reporting will be greater when they know
they or their partner will be protected in some way from
the effects of reporting. This can be broken down into two
sub-hypotheses. For the victim, this involves protection
from the offender or from certain offender behaviors. For

the offender, this involves protection from certain

systemic reactions or sanctions.

There were two victim protection options included in

this study. The first, mandated separation, has already been

discussed. Its affects were weak and not statistically

significant. The second involved giving the offender an

order against drinking alcohol for a certain period of time.

Table 24

**Reporting Likelihood with Offender Given an Order Against
Drinking Alcohol for a Certain Period of Time**

| | Net Effect of Intervention Option | | | |
| | | Violent and "established" couples | Violent | |
	Adjusted	omitted	Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	48.8%	66.7%	65.9%	65.2%
Additive Increase from Baseline	10.9%	22.2%	20.6%	22.3%
Factor of Increase From Baseline	1.29	1.50	1.46	1.52
Significance of Change		.007	.000	.000
Percent "Reporting" at 90% Cut-off	24.6%	36.4%	38.0%	38.5%
Additive Increase from Baseline	1.8%	10.4%	9.6%	11.3%
Factor of Increase From Baseline	1.08	1.40	1.34	1.42
Significance of Change		.039	.015	.001
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	14.46	16.9	13.9	15.7
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	29.65	29.5	28.9	30.0
Lower Bound of Confidence Interval for Difference in Scores from Baseline	6.75	9.6	8.8	11.5

The effect of this intervention on reporting was significant and moderate in all but the adjusted group. For this group, the effect was weaker, even though the frequency with which the partner became drunk was one of the independent predictive variables used in the logistic regression for weighting this group. This measure met the criteria for hypothesis acceptance.

Thus, one of the victim protection measures failed to meet the acceptance criteria, although it should be noted that this option required victim control and decision making. The other met the criteria for acceptance, and had moderate effects, which were weakest in the weighted and adjusted group.

A pair of offender protection measures were tested under the second part of this protection hypothesis. This pair consisted of an offender protection measure and the same measure with a mandatory arrest policy added. The first measure, which would disallow the use of career-affecting sanctions for first time offenders (as long as there was no serious injury involved and the offender successfully completed counseling) has already been

discussed briefly above. The complete results for this

item are shown in the following table.

Table 25

**Reporting Likelihood with No Career Affecting Sanctions
Used Against First Time Offenders**

| | **Net Effect of Intervention Option** | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	60.2%	71.3%	73.6%	72.7%
Additive Increase from Baseline	22.3%	26.8%	28.4%	29.7%
Factor of Increase From Baseline	1.59	1.60	1.63	1.69
Significance of Change		.000	.000	.000
Percent "Reporting" at 90% Cut-off	36.2%	36.3%	41.2%	41.5%
Additive Increase from Baseline	13.4%	10.3%	12.8%	14.4%
Factor of Increase From Baseline	1.59	1.40	1.45	1.53
Significance of Change		.064	.001	.000
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	19.1	17.5	17.2	19.0
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	35.1	29.2	29.6	30.0
Lower Bound of Confidence Interval for Difference in Scores from Baseline	11.2	10.9	12.4	15.0

As can be seen from this chart, this offender

protection option shows moderate to strong positive effects

across all but the smaller groups. Even in these groups, a

positive affect can be seen, although its significance is

not assured. This option meets the test criteria.

The next option discussed below adds mandatory arrest to the above measure. This option says, "Likelihood if your partner would be arrested and then released, but that career-affecting actions would not be used (as in question #31)".

Table 26
Reporting Likelihoods with Mandatory Arrest, But No Career Affecting Actions for First Time Offenders

| | Net Effect of Intervention Option | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	37.1%	53.8%	56.9%	51.7%
Additive Increase from Baseline	-0.8%	9.4%	11.7%	8.8%
Factor of Increase From Baseline	0.98	1.21	1.26	1.20
Significance of Change		.210	.029	.057
Percent "Reporting" at 90% Cut-off	23.0%	28.2%	27.8%	25.8%
Additive Increase from Baseline	0.2%	2.3%	-0.6%	-1.3%
Factor of Increase From Baseline	1.01	1.09	0.98	0.95
Significance of Change		.791	.999	.719
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	6.8	8.4	6.7	6.9
Significance of Difference in Reporting Scores (from paired T-Test)	.050	.008	.004	.000
Standard Deviation of the Differences	29.3	27.3	26.8	27.9
Lower Bound of Confidence Interval for Difference in Scores from Baseline	0.01	2.2	2.2	3.1

As can be seen above, the addition of a mandatory arrest policy weakened the affects of this intervention substantially, creating only small or nonexistent changes in self-reported likelihood of reporting. Likewise,

considering the net impact on the percent of respondents who would report, this arrest + offender protection intervention provided only very weak increases from the baseline in some groups, and in some groups even caused a decrease in reporting. Only one of the increases was statistically significant. Thus, this intervention fails to meet the acceptance criteria.

Overall, the victim protection option concerning an alcohol restriction for the partner (without a victim choice component) met the hypothesis criteria with moderate effects, while the victim-offender separation option (which required victim choice) failed to meet the criteria. Protecting the offender's career had moderate to strong significant effects and was accepted, while a separate option which added mandatory arrest to this option failed to meet the criteria and was rejected.

The next analysis discusses a similar pair of options to the one just reviewed. In this case, one is a composite option, while the other adds an arrest component to this composite. After analyzing those two, the focus will turn to arrest and the effect of arrest alone will be extracted from these pairs and analyzed.

The first of this option pair was a composite of offender protection, victim control, educational material, and follow-up options. This option provided for: the protection from career affecting actions, the ability to decide on the length of mandated separation, the ability to mandate counseling as a part of treatment, the ability to "suspend" pay and rank forfeitures, the availability of educational material, and case-worker follow-up for 1 year. The results for this composite mix are shown below.

Table 27

Reporting Likelihoods under the Composite Option

| | Net Effect of Intervention Option | | | |
| | | Violent and "established" couples | Violent Couples | Raw |
	Adjusted	omitted	Omitted	Data
Percent "Reporting" at 60% Cut-off	70.7%	79.7%	76.9%	75.1%
Additive Increase from Baseline	32.8%	35.3%	31.6%	32.2%
Factor of Increase From Baseline	1.87	1.79	1.70	1.75
Significance of Change		.000	.000	.000
Percent "Reporting" at 90% Cut-off	43.6%	46.8%	46.9%	47.0%
Additive Increase from Baseline	20.8%	20.9%	18.6%	19.8%
Factor of Increase From Baseline	1.91	1.81	1.65	1.73
Significance of Change		.001	.000	.000
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	26.25	23.3	20.3	21.8
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	36.5	31.2	31.2	30.7
Lower Bound of Confidence Interval for Difference in Scores from Baseline	17.9	16.3	15.1	17.7

As can easily be seen above, the composite option had strong and significant effects across all categories, raising individual reporting scores significantly and increasing the reporting percentages by at least a factor of 1.7. Easily, this option met all criteria for acceptance.

Also, although each of these options had been evaluated separately, this analysis shows that a combination of them yielded a result more effective than the best of the options included underneath it had separately.

The same option, with the addition of a mandatory arrest policy, is evaluated in the next two tables below.

Table 28

**Reporting Likelihoods under the Arrest + Composite Option
(Net Effects)**

	Net Effect of Intervention Option			
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	51.2%	63.3%	63.0%	60.0%
Additive Increase from Baseline	13.3%	18.8%	17.7%	17.1%
Factor of Increase From Baseline	1.35	1.42	1.39	1.40
Significance of Change		.004	.001	.000
Percent "Reporting" at 90% Cut-off	21.7%	29.1%	33.6%	31.7%
Additive Increase from Baseline	-1.1%	3.2%	5.2%	4.5%
Factor of Increase From Baseline	0.95	1.12	1.18	1.17
Significance of Change		.581	.152	.144

Table 29

Reporting Likelihoods under the Arrest + Composite Option (Likelihood Score Differences)

	Differences in Self-Reported Likelihoods			
Mean Difference in Reporting Score from Baseline	12.7	12.8	10.8	11.5
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	29.7	27.9	26.3	27.0
Lower Bound of Confidence Interval for Difference in Scores from Baseline	5.9	6.5	6.4	7.8

Once arrest is added to this option, its effect on reporting drops drastically. The mean change in reporting scores is cut nearly in half. The effect on total decisions to report under this option is no longer significant for any group using the 90% cut-off. This option fails the test criteria.

Before moving on to consider the final reporting hypothesis, the reporting effects of arrest that have been observed will be examined. This evaluation will be used in assessing a key hypothesis in a subsequent section of this research. For this analysis, the two pairs of interventions just discussed will be examined in a different way. By evaluating the differences in each pair, a picture of the

effect of arrest on reporting can be gained. The results of

this analysis are shown in Table 30 below.

Table 30
The Effects of Arrest on Reporting

| | Net Effect on Percentage of Reporters | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Pair 1				
Change in Reporting Due to Arrest at 60% Cut-off	-23.1%	-17.5%	-16.7	-21.0%
Factor of Change in Reporting	.62	.75	.77	.71
Significance of Change in Reporting		.004	.000	.000
Change at 90% Cut-off	-13.2%	-8.1%	-13.4%	-15.7%
Factor of Change in Reporting	.64	.78	.67	.62
Significance of Change in Reporting		.180	.001	.000
Pair 2				
Change in Reporting Due to Arrest at 60% Cut-off	-19.5%	-16.4%	-13.9%	-15.1%
Factor of Change in Reporting	.72	.79	.81	.80
Significance of Change in Reporting		.000	.000	.000
Change at 90% Cut-off	-21.9%	-17.7%	-13.3%	-15.3%
Factor of Change in Reporting	.50	.62	.72	.67
Significance of Change in Reporting		.001	.000	.000
Differences in Self-Reported Likelihoods				
Pair 1				
Mean Difference in Individual Scores Due to Arrest	9.95	7.82	9.72	11.75
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.001	.000	.000
Lower Bound of Confidence Interval for Difference in Scores	5.29	3.10	6.17	8.80
Pair 2				
Mean Difference in Individual Scores Due to Arrest	13.51	10.38	9.32	10.23
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Lower Bound of Confidence Interval for Difference in Scores	9.35	6.35	6.43	7.82

As can easily be seen in this table, mandatory arrest had consistent, significant, and strong negative effects on reporting likelihood almost across the board. Arrest seemed to cause a mean drop in likelihood score of around 10 points. It caused a net drop in the theoretical reporting rates of at least 15%. These changes in reporting "decisions" were significant in all but one case (the 60% cut off in the non-violent and established small subgroup). The multiplicative factor for the change was about 0.75.

One final reporting hypothesis remains to be tested. This hypothesis is that victim reporting will be greater when the disincentives identified by Caliber Associates are removed. Most of the disincentives mentioned by the Caliber study fell into other categories above and have already been tested. However, two related options remain to be tested under this hypothesis.

First, one of the identified disincentives was the loss of privacy. For this reason, an option was tested wherein only the family advocacy case worker and the USAF member's commander would be advised of a reported incident.

The results for this option are shown below.

Table 31
Reporting Likelihoods for Privacy Option

| | **Net Effect of Intervention Option** | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	52.6%	66.3%	70.5%	70.0%
Additive Increase from Baseline	14.7%	21.8%	25.3%	27.1%
Factor of Increase From Baseline	1.39	1.49	1.56	1.63
Significance of Change		.001	.000	.000
Percent "Reporting" at 90% Cut-off	29.0%	40.0%	43.2%	43.3%
Additive Increase from Baseline	6.2%	14.1%	14.8%	16.2%
Factor of Increase From Baseline	1.27	1.54	1.52	1.59
Significance of Change		.004	.000	.000
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	10.31	15.1	15.6	17.0
Significance of Difference in Reporting Scores (from paired T-Test)	.006	.000	.000	.000
Standard Deviation of the Differences	32.09	28.3	28.0	28.3
Lower Bound of Confidence Interval for Difference in Scores from Baseline	3.1	8.7	10.9	13.2

The effect of this privacy option is strong and significant across all categories. It changes the mean reporting score by over 10 points and appears to increase reporting by a factor of 1.5. This option easily meets the criteria for acceptance of this part of the hypothesis.

The second option in this category addresses the disincentive labeled by Caliber Associates as distrust of

the military, as well as also addressing the privacy issue.

It involves the ability to report domestic violence to an

off-base civilian agency which would handle the entire

incident, with the only military involvement in this case

being an information-only notification to a case worker at

family advocacy for record-keeping and tracking purposes.

Table 32

**Reporting Likelihood if Incident Could Be Reported to and
Handled by a Civilian Agency**

| | Net Effect of Intervention Option | | | |
	Adjusted	Violent and "established" couples omitted	Violent Couples Omitted	Raw Data
Percent "Reporting" at 60% Cut-off	64.2%	65.4%	67.6%	65.9%
Additive Increase from Baseline	26.3%	21.0%	22.3%	23.0%
Factor of Increase From Baseline	1.69	1.47	1.49	1.54
Significance of Change		.005	.000	.000
Percent "Reporting" at 90% Cut-off	21.9%	32.1%	37.2%	36.8%
Additive Increase from Baseline	-0.9%	6.2%	8.8%	9.6%
Factor of Increase From Baseline	0.96	1.24	1.31	1.35
Significance of Change		.238	.031	.003
Differences in Self-Reported Likelihoods				
Mean Difference in Reporting Score from Baseline	12.4	14.8	13.4	14.8
Significance of Difference in Reporting Scores (from paired T-Test)	.000	.000	.000	.000
Standard Deviation of the Differences	26.1	32.2	30.0	30.7
Lower Bound of Confidence Interval for Difference in Scores from Baseline	6.5	7.6	8.5	10.7

Interestingly, this option has no more effect than the previous option, which addressed the privacy issue without addressing the distrust of the military issue. In fact, the strength of this alternative is less than the previous one. Like the previous option, this measure succeeds under the criteria for acceptance, and this hypothesis is confirmed. However, the results from the smaller groups clearly constrain the conclusions to be drawn from this.

Evaluation of the Simplified Deterrence Equation

One of the key hypotheses for this study was that, when measured in the Simplified Deterrence Equation introduced briefly earlier, the enhanced reporting model would be superior to mandatory arrest models in deterrent effects. All of the data necessary for examining this hypothesis has now been gathered.

Table 33

Simplified Deterrence Equation for Rates

Simplified Deterrence Equation for Rates per 1000 people

$$Recid\ per\ 1000\ people = (I \times A) \times R_{Ravg} + (I - (I \times A)) \times R_0$$

Where R = Recidivism Rate (Percentage)
I = First Incident Incidence rate per 1000
A = Percentage of People Reporting under the given system

Subscripts:
R = Reported
0 = No (Null) Treatment
avg = the average across all official interventions

Table 33 shows a form of the Simplified Deterrence Equation using rates per one thousand people. From the data collected in this study, it has been found that the null treatment recidivism rate is approximately 63%, the current reporting rate is 8.5%, and the incidence rate of USAF member perpetrated abuse is 151 per 1000. However, since this equation is technically only considering first time offenders, this rate must be converted to the incidence rate of first time abuse, which for this study was 27.9 per 1000, not counting instances reported by the respondent as self-defense (including the self-defense occurrences would have raised this rate to 31.33).

Thus, the result that will be produced by the equation is how many USAF members will go on to re-offend each year. Because of the way this is measured, the effects are somewhat understated. The average couple in which a recidivist was present in this study had experienced several separate incidents involving one or more uses of violence. The edges of the interquartile range for the number of physical incidents per recidivist couples were 3.0 and 6.0. These numbers will be used to gain a rough

idea of the total number of incidents prevented for each
partner that does not recidivate.

Thus, the only variable in this equation not available
from the data gathered in this study is the treatment
recidivism rate. Using the information from the review of
the literature, this variable will be assigned a tentative
value of .30 for the current process. Since this value is
at best, an educated guess, results will actually be tested
using several values for the treatment recidivism rate.

From the data on reporting in the arrest/non-arrest
pairs, the number of people reporting once arrest was
introduced into the option dropped by a factor of between
.50 and .81 (between 19% and 50%). The average of the
factors is .70. However, it is realized that these are not
experimentally determined actual reporting rates.
Therefore, in order to be conservative in testing the
hypothesis that maximizing reporting yields a larger effect
on total cases of recidivism than arrest, the number at the
high edge of the interquartile range (representing a
smaller reduction in reporting than the mean) of the 16
will be used when estimating the effect of arrest on
reporting. This number is 0.775. For the first trial, the

mandatory arrest policy creates no change in the recidivism rate of reported offenders.   In this trial, mandatory arrest will be compared against the current situation, without any enhanced reporting measures.   In this case, if the factor of change above is applied to the current reporting percentage, the equation predicts that mandatory arrest could be expected to increase the number of recidivists by .18 per 1000 people a year, or approximately 36 couples and 104 to 215 physical incidents per year if this is extended to include the entire married population of the Air Force.

Next, the change in the treatment recidivism rate required to offset this effect was evaluated.   In order to balance the detrimental effect on reporting, it was calculated (from the Simplified Deterrence Equation) that the treatment recidivism rate would have to change by 9%. Thus, if mandatory arrest alone was found to decrease the treatment recidivism rate by over 9%, a positive effect could be expected in relation to the current system. Varying the current treatment recidivism rate (which, as has been mentioned, is somewhat speculative) between 20% and 40% moved this requirement to 12% and 6% respectively.   However, at rates near 50%, this requirement drops rapidly to 4%.

The next analysis will examine the effect of the reporting options alone on the equation. Because some of the options in the reporting section are controversial and somewhat impractical, a more conservative factor will be used in this analysis than was found in some of these reporting tests. For this test, a factor of 1.5 will be used. Four of the ten options not including arrest resulted in this factor change or higher for both larger groups at both cut-offs and were significant at the .05 level. Two met or exceeded this factor for both larger groups on one of the cut-offs. The results of this analysis show that the effect of this change in reporting would be expected to decrease the number of recidivists by 0.39 per 1000 people per year (80 couples and 239 to 476 physical incidents a year USAF-wide). This change would be reduced to zero if these options to enhance reporting increased the treatment recidivism rate by over 11%.

Again, if the treatment recidivism rate is varied between 20% and 40%, this required change becomes 14% and 8% respectively. At 50%, it becomes 5%.

The testing of the key hypothesis for this section will now be presented in two parts. In the first case,

enhanced reporting options from the previous analysis sections are evaluated against a pure arrest model. In the second evaluation, enhanced reporting options are evaluated against the same options with an arrest provision added.

Since the preceding analysis found that with no change assumed for treatment recidivism due to arrest, arrest had a negative effect, and since it has been determined that the reporting options would likely have a positive effect, the answer to the first part of the hypothesis under the equal recidivism assumption is already determined.

However, since the assumption that arrest by itself causes no change in the post-treatment recidivism rate may be false, it is necessary to see how large of a difference in recidivism would be required to render arrest the superior solution. Using the simplified deterrence equation, for the 30% baseline treatment recidivism rate, even a 30% decrease (treatment recidivism = 0%) is insufficient. For an assumed 40% baseline, a 22 percent decrease is required. And for a 50% treatment recidivism rate, the required decrease is 12%. Since the literature review has provided no basis to assume such large drops are created by arrest alone, this hypothesis is confirmed.

One further analysis remains to be done. In this case, instead of testing a pure arrest option versus a pure reporting option, a mixed option is tested. In this case, the offender protection and protection + arrest pair are modeled against each other as are the composite and composite + arrest pair. For each analysis, the expected benefits of the pure reporting intervention are reported along with the expected benefits of the reporting + arrest option. The means of the multiplicative factors found in the reporting analyses are used in each case. Then, the amount of change in recidivism due to arrest required to make the arrest plus reporting model superior is reported. The results for each pair are shown in Tables 34 and 35 below.

Table 34

Comparison of Reporting-Targeted Options and the Same Options with an Arrest Component (Pair 1)

Pair 1	Expected Change in Number of Recidivists per year per 1000 people	Change in Number or Recidivists Expected USAF-wide	Expected Change in Incidents per year USAF wide
Offender Protection-Reporting Option (Factor=1.59)	0.46	94	281-564
Offender Protection-Reporting Option + Arrest (Factor=1.05)	0.04	8	24-48
Baseline Assumed Treatment Recidivism Rate	30%	40%	50%
For Assumed Treatment Recidivism Rate, Required Change Due to Arrest for Combined Option to be Superior	-17.5%	-18.0%	-18.5%

Table 35

Comparison of Reporting-Targeted Options and the Same Options with an Arrest Component (Pair 2)

Pair 2	Expected Change in Number of Recidivists per year per 1000 people	Change in Number or Recidivists Expected USAF-wide	Expected Change in Incidents per year USAF wide
Composite-Reporting Option (Factor=1.77)	0.60	123	368-735
Composite-Reporting Option Plus Arrest (Factor=1.265)	0.21	42	127-253
Baseline Assumed Treatment Recidivism Rate	30%	40%	50%
For Assumed Treatment Recidivism Rate, Required Change in Recidivism due to Arrest for Combined Option to be Superior	-13.5%	-15.5%	-17.5%

For either pair, the change in recidivism required to make pro-arrest measure the superior option is 11% or more. Therefore, this hypothesis is confirmed. From the review of the literature, there is no basis for believing that such an large affect exists for arrest alone (excluding sanctions, since in the military system arrest is not required for sanctions), even in a military subgroup.

Periods of Separation

The next hypothesis to be considered proposed that the number of incidents of abuse and the percent of couples experiencing abuse would be greater in couples recently

experiencing long periods of separation. First, a cross-tabulation of the dichotomous variable for violence this year and a six category variable for period of separation in the last year was evaluated. The chi-square value for this contingency table was not significant at $p < .05$. ($p = 0.60$)

Secondly, both for all couples and for only violent couples, the time of separation was compared in a contingency table to a 3-value measure for the amount of violent tactics used in the last 12 months. Again, the chi-square statistics gave a probability level over .05. ($p = 1.0$ for both)

To check these results to ensure the method of collapsing the categories had not obscured a relationship that might exist, logistic regression was also run on the first hypothesis. Again, the results found no significant relationship. Therefore, this hypothesis was rejected.

Recent Relocations

The next hypothesis to be considered suggested that the number or incidents of violence and the number of couples experiencing violence would also be greater in couples that had recently relocated. Thus, the time since the last relocation was tested against the dichotomous

variable for violence this year using a chi-square test.
The chi-square statistic was not significant. Then, the
variable for how long it had been since the couple
relocated was collapsed into two categories representing
couples who had moved within the last year and those who
had not. Again, this variable was tested in the entire
sample and against the subgroup of violent couples for a
significant relationship to a three category version of the
variable for chronicity of physical tactic use. No
significant relationships were found. As a check against
the categorization technique, the relationship between any
violence and the time since the last move was tested using
logistic regression. Again, no relationship was found,
causing this hypothesis to be rejected.

Official Reporting and Social Isolation

The final hypothesis was that official reporting would
be less likely among those who were more socially isolated.
Unfortunately, since only 5 respondents in the sample had
ever reported an incident of abuse, the analysis of this
hypothesis must rest on the respondents' self-reported
likelihoods of reporting. Two measures of social isolation

were used. The first was a measure of how often the respondent had contact with other military people or military spouses. A three level ordinal version of this variable was used in this analysis. The second was a measure of how involved the respondent was with their church, co-workers, and other groups. These were both assessed using a single question each and certainly do not have the validity of a social isolation scale. These data were contrasted against the respondent's current self-reported likelihood of reporting. This was done for all respondents, for respondents who had never experienced violence, for respondents who had experienced violence, and for couples who were violence-free and had been married less than ten years.

Using a one-way analysis of variance found all of these relationships to be insignificant except for the relationship between involvement with other spouses and reporting, and this relationship was only found to be significant in the smaller group that had not had violence and had been married 10 years or less. The F Statistic for this relationship was 3.43 (p=.038). A Post-hoc analysis using the Scheffe method found significant differences

between categories 1 (low involvement) and 3 (high involvement) of this variable. Significant contrasts were also found for low involvement versus the mean of medium and high involvement (p=.023) and for high involvement versus the mean of low and medium involvement (p=.027). However, this one effect on this small subgroup was the only relationship found to be significant. Since this hypothesis in its original form applied to an effect concerning the sample as a whole, overall this hypothesis must be rejected.

Knowledge of Domestic Violence in Other Couples

One exploratory portion of this study, for which no hypothesis was stated, was an investigation of the extent to which Air Force couples know of violence in other couples' relationships.

The data gathered from this study show that 29% of the sample had strong reason to believe violence was occurring in the relationship of a friend or neighbor in the past four years. Twelve percent of the sample had reason to believe this was occurring in more than one couple in that period.

Of those who had this belief, 25% (7% of the total sample) had reported this belief to an official agency.

All but one of these reports were to the police. There was no significant relationship between this belief or reporting this belief and living on base.

The answers to a related question from respondents who were victims of violence were similar to these results. Of the victims who did not report to an official agency, 23.6% said they had told a friend or a neighbor about the violence.

Other Data Analysis

In addition to the items discussed already in this section, reliability analysis was also performed on the CTS2 scales and on the self-defense scale, although there were zero-variance items on several of the scales. These analyses included the Cronbach Alpha for each sub-scale, along with item-total correlations and the alphas that would result if the item was deleted. Reliability alphas of less than .6 were found for four of the subscales used. These were: the respondent use of physical tactics subscale, the partner injury subscale, and both self-defense subscales. The complete results for this analysis are listed at Appendix G.

CHAPTER V

CONCLUSIONS

The first item that must be discussed before specific conclusions are proposed is to whom those conclusions would apply. The sample size, coupled with the similarity of the sample and Air Force demographic profiles, seem to suggest that generalizability to the majority of Air Force members is possible. However, certain minority groups (female USAF members, Muslims, etc.) were not well represented in this study. Of course, to the extent that any of these unrepresented or underrepresented characteristics impact the violence and reporting behaviors of these groups or their spouses, the results from this study may not be accurate in representing their behavior. For instance, since the Caliber studies found female USAF members to use significantly more physical tactics than their male counterparts, this study is likely only fully generalizable to male Air Force members and their female spouses. The possibility that male spouse official reporting of abuse is different from female spouse reporting is another reason

for this exclusion. The lack of complete generalizability to female Air Force members is likely this study's most significant generalizability limitation.

However, for other factors, such as race, this study is likely generalizable across the major "categories". No significant correlation has been found between actual abuse rates and race alone in this study or in other military studies. Therefore, slight under-representation in the sample of these types of categories is unlikely to affect generalizability.

As for civilian populations outside the Air Force, except in a few areas, this study is likely only generalizable in its main concepts. Much of the data and results would likely change outside of this military environment. Some of the items that would likely be similar enough for valid comparison, however, are incidence rates, the uses of self-defense, the differences between men and women, and null-treatment recidivism measures. Although these figures may be similar to known or suspected civilian characteristics, there are many specific military and Air Force factors that distinguish this population and

have likely affected these measures to some extent and other, non-comparable measures to an even greater extent.

The simple facts that all members of the Air Force are 1) employed, 2) entitled to a substantial retirement plan at a relatively early age if they are not discharged, 3) live and work in a very structured environment, 4) have a unique legal system, and 5) have a very different system for handling domestic violence incidents, make generalization of findings to a civilian community a sizeable leap. However, the main premises that generated this study are very applicable to civilian populations and the results of similar studies done in civilian populations would certainly be interesting and valuable.

The final generalizability issue lies in this study's portability to the other military services. Although the Air Force is certainly to some degree unique from the other services in its demographics, recruiting, and style of operation, many of the main factors considered in this research are more similar than different. The many similarities in the ways that domestic violence is handled in the services (Caliber, 1996), the similar rank system and lifestyles, and the shared legal system all point to a

large degree of similarity between the services. However,
at least in the case of violence incidence rates in the
Army, this is not true (Caliber, 1996). Therefore, the
main findings and lessons learned from this study would
likely be similar in the other services, but actual
generalizability of rates and percentages from the results
would likely be too much of a stretch. Although rates and
exact effects may vary between the services, the same
forces (especially in the reporting and recidivism areas)
are present. This again implies that the main conclusions
in these areas would likely lead to similar conclusions if
this study were done in the other services. This is
especially true of reporting, where the direction and
effect are likely similar, although the strength of the
effects may vary.

Incidence Rates

As always in a study of domestic violence, the rate of
incidence is a major concern. In this research, many
similarities with previous civilian studies were found.
However, most of the minor abuse measures were consistently
(but not significantly) elevated in the military sample.

Since correlations were not found with family separation or recent moves, the possibility remains that this increase is either random, an artifact of demographics, or it is possible that minor violence may be more accepted in the military subculture. However, the facts that age did correlate significantly and strongly with abuse in the sample and that a large portion of the sample was young (42% were 32 or under), points to the former conclusion.

The fact that the separation and movement of families (and their subsequent reintegration) did not correlate significantly with abuse failed to provide the expected support for power and authoritarianism theories as a central causative factor in this USAF sample.

Discrepancies in serious abuse rates were found with the 1995 Needs Assessment survey, which also surveyed an Air Force population. This seems likely to be a result of the difference in anonymity in the surveys, and in the fact that the Needs Assessment survey omitted several of the items from the serious abuse section of the CTS. These items were included in this study, and answered affirmatively by several respondents.

The use of a self-defense measure allowed this study to look at adjusted incidence rates as well. For these results, it seemed like very little of the violence that occurred was self-defense, even as labeled by one of the participants. However, when adjusted for self-defense, a significant difference was found in the use of serious abuse tactics. This gives some credence to the argument that the equal incidences between men and women often found in this area are at least partly a result of the smaller member of the couple resorting to more serious tactics in self-defense. This more one-sided view of serious abuse was also supported by the finding of a significant difference between men and women in rates of injury from domestic violence. However, it should be noted that the vast majority of the men were USAF members and the vast majority of the women were civilian spouses. Thus, these differences could also be viewed as military versus non-military differences. However, the fact that most of the incidence rates closely parallel civilian study rates would make this a hard proposition to accept. Nevertheless, the possibility that this effect was a combination of these two factors is possible and even somewhat plausible, although

again because of the great similarity in the overall military rates to the civilian data, gender differences seem more likely the main influence.

The limited examination of abuse using linear regression yielded very few surprises, finding most of the same correlates to abuse frequently found in the literature. However, the finding that use by the respondent of physical tactics not in self-defense was the largest predictor of receiving serious abuse is significant. Although this concept has certainly been proposed elsewhere, separating violence used in self-defense and not in self-defense had been a problem. There was some amount of autocorrelation expected when self-defense could not be separated out since certainly victims of severe abuse would be more likely to use physical tactics in self defense than others. The separation of these two types of use of physical tactics eliminated this autocorrelation effect and showed the relationship between violence not in self defense and serious abuse more clearly.

Recidivism

The null-treatment recidivism rates found in this study were virtually identical to the rates found in other studies. The fact that these reoccurrences were spread out over four years provides support for longer longitudinal studies. However, it should be noted that 87% of the reoccurrence had taken place by the end of the second year, meaning that studies of this duration or longer likely capture the majority of these cases. However, many of the offenders, even serious and repeat offenders, desisted for over a year. Thus, recidivism studies focused on a smaller time frame are likely to underreport this figure.

Getting Domestic Violence Offenders into the System

Despite all the different facets of domestic violence that this study has probed, it has had one main focus, deterring offenders from recidivism. Given that post-treatment recidivism is less than null-treatment recidivism (although for some programs even this has been debated), the focus must be on maximizing the difference between the two rates and moving as many offenders as possible into the treatment category. This study, theorizing that this

difference in recidivism rates is already substantial for USAF members, primarily due to a USAF member's likely stake in conformity, has concentrated on the latter goal of "getting offenders into the system". Thus, the emphasis has not been on curbing use of violence directly, but rather on affecting the somewhat rational behavior of reporting spouse abuse.

One main weakness exists with the results of this study. That is, it has not been possible to determine definitively that the relative strengths assigned to the reporting-affecting options are valid. Certainly direction and significance of effect have been supported as valid, but the issue of using the multiplicative factors of change for each option as referenced against the study baseline and applying these factors to the actual reporting baseline number to predict the expected actual effect of an option remains somewhat questionable. If the overall self-reported likelihood to report did not match reality (respondents seemed to overestimate this), there is some reason to believe the variability reported in these figures from option to option also might not match reality, especially since the respondents were a random sample and

not a group of victims in the throes of actually making this decision. For this reason, throughout the study, conservative estimates were used to model these types of effects. However, there is a possibility that the initial overestimation of current reporting likelihood and the resulting creation of this higher baseline against which the options in the study were measured may have actually caused the study to underestimate this variability. This would mean that the options are actually more powerful than advertised. This is because it may be more difficult for an option, even in a study, to create a 1.6 factor of increase from 30% to 48% reporting (a rise of 18%), than it is to create a 1.6x increase from 8.5% to 13.6% (a rise of 5.1%) in actuality.

Clearly, the strength of reporting changed significantly from intervention to intervention in a seemingly rational manner (the composite created more change than any one of its members), which at a minimum seems to suggest valid measurement of a relative strength of effect.

These results showed that required counseling, privacy safeguards, and limitations on sanctions imposed on the

offender all affect reporting strongly. Provision of educational material also showed limited promise, but multiple distribution methods will be necessary to get this information out. Restrictions on alcohol usage were also significant. Long term follow up was not a strong incentive to report, nor was being able to report to a civilian agency. Surprisingly, victim control over major areas such as arrest and limitation of sanction did not seem to help reporting. Instead, it seemed that in areas such as limitation of sanction, options had a better effect on reporting when they were automatic. Still, victim control should not be ignored, because the empowerment and bargaining power it gives the victim may be a worthwhile end apart from its non-affect on reporting. The areas over which this control is given, however, must be carefully chosen or it appears that these type of options could actually diminish reporting.

Mandatory arrest was shown to have strong negative effect on reporting in this USAF sample. Without substantial proof that arrest by itself aids deterrence substantially (especially since arrest is not a prerequisite to sanction in the military), the implication

is clear that mandatory arrest policies in the Air Force and likely the military as a whole would likely be counterproductive.

Using conservative estimates based on the reporting analysis, this study attempted to extend the analysis one step further to assess arrest and reporting centered policies and get a crude measure of the magnitude of the effects some of the proposed options might have.

Overall, reporting-centered policies were found to be superior to even composite reporting/arrest policies, and the "expected" benefits of instituting reporting centered policies were substantial. These benefit computations were likely substantially understated for two reasons. First, only the effects on first time offenders and victims were examined. Undoubtedly, making reporting a more attractive option will also result in higher reporting from other victims with longer histories of abuse as well. In addition, making reporting more acceptable will likely also affect reporting by friends and neighbors. This study found that a friend or neighbor knows about one in every four cases of unreported abuse. This is yet another force to "get offenders into treatment". Even if one in every ten

neighbors or friends who knew about abuse reported it, the reporting rate would jump by almost a factor of 1.3 from this source alone. More desirable and less disagreeable consequences for their friends once reported (such as mandatory counseling, privacy safeguards, and protection from career-affecting sanctions) seem a likely way to encourage such actions. Increases in reporting not only decrease recidivism, but since more offenders can be identified (at least by the commander and family advocacy), it allows the commander of a unit much better awareness of problems with his or her people. This may seem a small concern, but for the commander of a nuclear security unit or an intelligence organization, for instance, this is a significant factor.

In summary, this research provides a clear caution from all currently completed research against considering mandatory arrest as a policy for improving the spouse violence situation in the Air Force.

Instead, the results of this study suggests that there are several measures that are easily implemented and seem to hold great promise in decreasing offender recidivism by

increasing official reporting and bringing more offenders into the treatment system.

The most promising mix seems to be privacy safeguards, mandatory counseling, and some limitations on the sanctions applied to first time offenders (specifically, career-affecting actions). Also, some provisions for victim control seem to provide promise. Although it would likely face opposition, a provision for alcohol abuse screening for all cases and subsequent restrictions for those found to need it would also help reporting and, as the logistic regression analyses suggest, would also affect the likelihood of severe violence. The best strategy seems to be to roll these options together into a composite pattern and publicize the process through various distribution means. This distribution is critical because reporting behavior cannot be affected by measures that are not known. For this reason as well, these presentations of the system must be clear and simple, emphasizing the measures mentioned above.

All the results from this study suggest that, with the type of system outlined above in place, strong and

significant declines in the rate of subsequent acts of spouse violence can be expected.

Directions for Further Research

This research asks almost as many questions as it answers and there are three research directions that seem to naturally lead out of its results.

First, in the only research suggestion that is not population-specific, a self-defense scale such as the one used here needs to be psychometrically developed and used in a large-scale study. This scale, even in the undeveloped form used here, proved not to be as problematic as originally thought. Respondents did not code large amounts of their violence as self-defense. Instead, the self-defense rates were much smaller and seemed more realistic than originally expected. The ability of the information gained by such a measure to answer key questions about gender specific uses of violence makes it worth pursuing.

However, the most important continuation of the work done in this study would be determining the real effects of the various reporting options. This can really only be

done in a population-specific experimental study. The

present research has laid the groundwork for such a study

by narrowing the field of theoretically useful options to a

few interventions which can be expected to work well, and

by providing a rough idea of what answers to expect.

Fielding various interventions at several bases would be

one option. However, a less costly option would be to use

self-report and official data to create a baseline for one

or several bases and then implement an "ideal" composite

measure (or several versions, if enough bases

participated). A base would really be the smallest unit of

analysis possible, since enhancing reporting requires a

consistent use of the same measures (and education as to

those measures). Therefore, other bases similar to the

treatment group would have to serve as controls.

The second critical issue is the determination of the

post-treatment recidivism rate. The USAF and military

processes are very different from civilian systems in this

area, so military or service specific analysis is critical

here. It is very important that this measure of recidivism

include both reported and unreported violence, to extend

current research and provide a whole picture of the recidivism situation.

Despite the difficulty in studying these areas, the continued identification of the relative strengths of recidivism and reporting effects is key to reducing spouse violence in the Air Force and elsewhere. This study has been another step on that path.

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APPENDIX A

Military Couple Questionnaire
USAF Survey Control Number: 97-46

Note: Any views expressed or implied in this questionnaire are those of the author and do not reflect the official policy or position of the United States Air Force, Department of Defense, or the US Government.

As explained in the cover letter, this questionnaire is completely **anonymous** and **confidential**. You will see that the questions are written so that no one will be able to identify you in any way. Although it may appear rather long, most people will be directed to skip large portions of the survey and the average time to finish it is less than 25 minutes.

Some of the questions on this survey are personal. Your honest and frank answers to these questions are essential, and are vital to this project. That is why we have gone to great lengths to assure anonymity, so that you can feel free to answer these questions truthfully. However, answering each question is voluntary. If you do not feel you can answer a certain item, you may leave it blank and go on to the next one. However, the more questions you answer, the better our understanding of this subject, so please answer as many questions as you can. Also, if you have questions or need a replacement survey, please call the researcher collect at (804) 553-3916. Just tell the operator that you are a "survey respondent" (no name is necessary) and the call will be accepted. Thanks again for your help with this important project.

Please answer all questions directly on the survey. It is not necessary to use any particular technique to mark your answers. These surveys are to be hand-scored, so any mark the scorer can see (checkmark, circled answer, etc) is fine. This should allow you to complete this survey very quickly. When you are done, please just slip the whole questionnaire in the pre-stamped envelope and drop it in the mail.

This first section of the survey will not ask about any possible personal experiences with physical violence from your partner (if you have one). Instead, it only asks how you think certain issues would affect your willingness to report this type of incident if it were to happen to you.

The following list provides some examples of what the Department of Defense has identified as inappropriate physical conduct between partners when done against the partner's will: grabbing, pushing, holding, slapping, choking, punching, sitting or standing on, kicking, hitting with objects or assaulting with knives, firearms or other weapons. In this survey, we are looking at these issues only between partners, or spouses. This survey **does not** address physical contact with children or others living in a household.

There are many factors that go into deciding whether or not to report an incident of family violence by a partner to an **official agency**. An official agency is an agency that will make contact with and affect the person who committed the physical act in an official capacity (for instance: family advocacy, police, commander, first sergeant, etc.). Below are some factors that might or might not affect your likelihood of reporting family violence if you were a **victim** of it (if your partner used physical force against you).

How much do each of these factors make you more or less likely to report an incident of family violence **in which you were the victim** to an **official agency**. (If a question refers to a belief or fear you do not have, just mark "no effect".)

	A lot less likely (0)	Somewhat less likely (1)	A little less likely (2)	No effect (3)	A little more likely (4)	Somewhat more likely (5)	A lot more likely (6)
1. Fear of retaliation from your partner.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
2. Fear that reporting would only make the situation worse.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
3. Fear that friends/neighbors would find out.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
4. Lack of information on who to contact.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
5. Lack of information on what would happen if you reported a physical incident.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
6. The possibility of your partner losing rank/pay.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
7. The possibility of your partner being separated from the service.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
8. The possibility of other military punishments (not including rank/pay losses or separation).	[0]	[1]	[2]	[3]	[4]	[5]	[6]
9. The possibility of your partner being arrested (not including any later punishment, just arrest).	[0]	[1]	[2]	[3]	[4]	[5]	[6]
10. The possibility that your partner will be separated from you for a period of time.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
11. Fear of being blamed for the situation.	[0]	[1]	[2]	[3]	[4]	[5]	[6]

1

How much do these factors make you more or less likely to officially report family violence as a **victim**? (Continued)

	A lot less likely (0)	Somewhat less likely (1)	A little less likely (2)	No affect (3)	A little more likely (4)	Somewhat more likely (5)	A lot more likely (6)
12. The availability of counseling and other services to help you.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
13. The availability of counseling and other services to help your partner.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
14. Any belief that this issue is a personal matter.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
15. Confusion as to what actions really are abuse.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
16. Fear that family/friends would think badly of you for reporting the incident.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
17. Fear that reporting would cause a family break-up.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
18. Fear that your partner's career would be hurt by formal punishments, paperwork, etc.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
19. Fear that your partner's career would be hurt informally by them being "labeled" in the unit.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
20. Fear of no longer being able to support yourself or your children.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
21. Any feeling that the military response to the incident would be inconsistent or arbitrary.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
22. Any feeling of distrust of the military.	[0]	[1]	[2]	[3]	[4]	[5]	[6]
23. Fear that reporting would hurt **your** career.	[0]	[1]	[2]	[3]	[4]	[5]	[6]

24. If written information was available in both public (i.e. BX, PX, Commissary) and private (i.e. Family Services, Family Advocacy) areas on how to report physical incidents in the family and on the process that would be used by official agencies to handle the complaint, including the role and choices of the victim in the process, would you pick it up?

  0. No.   **1.** Possibly.   **2.** Probably.   **3.** Definitely.   **4.** Don't know.

Below are some possible ways domestic violence can be handled. Please consider how each of these factors, by itself, might affect your decision to report an incident in which **your partner** used violence to an **official agency**. Please consider each option separately, ignoring all the others that have gone before unless specifically told in the question to consider them together. For each question, you are given a situation and are then asked to estimate how likely you would be to officially report an incident of family violence in that situation.

	Would not report 0% (0)	Very Unlikely 20% (1)	Unlikely to report 30% (2)	Possibly 40% (3)	I don't know. 50% (4)	Probably 60% (5)	Likely to report 70% (6)	Very Likely 90% (7)	Would Definitely 100% (8)	Cannot say (9)
25. Right now, with things as they are, how likely would you be to report a physical incident with your partner (in which you were the victim) to an official agency.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
26. If you had educational material that defined "abuse", showed the procedures that official agencies would use to handle your report, listed the normal and possible sanctions and punishments for family violence, and explained the role and rights of the victim.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
27. If you would be assigned a case worker who would follow your case for one full year.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
28. If you would be allowed to decide the length of separation between 5 hours and 30 days.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
29. Likelihood if you could mandate counseling for one or both of you as part of the treatment.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
30. If you would have the option of making any reduction of rank or pay into a "suspended sentence". ("suspended sentence" meaning that the punishment would not be applied unless there was a second incident.)	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]

	Would not report 0% (0)	Very Unlikely 20% (1)	Unlikely to report 30% (2)	Possibly 40% (3)	I don't know. 50% (4)	Probably 60% (5)	Likely to report 70% (6)	Very Likely 90% (7)	Would Definitely 100% (8)	Cannot say (9)
31. If career-affecting actions (rank reductions, Letters of Reprimand, Article 15s, separations, denial of re-enlistment, etc.) could not be used against your partner for his/her first reported offense as long as serious injury was not involved and he/she completed counseling.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
32. If you would have the decision power in questions #28-30, the educational material in question #26, would have the case-worker follow-up in question #27, and your partner's career was protected as in question #31.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
33. Likelihood if your partner would be arrested and then released, but that career-affecting actions would not be used (as in question #31).	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
34. If your partner would be arrested but protected from career actions as in question #33 and you had everything in question #32.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
35. If you could decide if your partner would be arrested (providing there was no serious injury but there was enough evidence for an arrest).	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
36. If the only people who would ever know about the incident were the family advocacy case-worker and your partner's commander.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
37. Likelihood if you knew your partner would be given an order against drinking alcohol for a certain period as part of the treatment.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
38. If you could report to a non-military agency who would handle the incident without military involvement, and the only military agency that would be notified would be family advocacy (the report would only be reviewed by family advocacy workers).	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
39. Likelihood of your reporting if you were stationed in your own hometown.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
40. Likelihood if a trusted friend or neighbor advised you that it was the right thing to do.	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]
41. Likelihood of reporting a second incident (if you had not officially reported the first offense)	[0]	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]

Are there other things that would affect your likelihood to report an incident of family violence? (write in blank below)

42. What is your current age?

0.	17-18	**3.**	23-24	**6.**	30-32	**9.**	41-44
1.	19-20	**4.**	25-26	**7.**	33-36	**10.**	45-49
2.	21-22	**5.**	27-29	**8.**	37-40	**11.**	50 or over

43. What is your gender?

0. Male   **1.** Female

44. Are you **currently** (**or have you been in the last seven years**) married or involved in a close, intimate relationship?
   This includes relationships with spouses, ex-spouses, and very serious dating relationships lasting 6 months or more.
0. Yes - Please turn the page and continue.   **1.** No - Please skip to part **E** on page 15 and continue with question #199.

In this survey, we define a **couple** as two people in a marriage or other close, intimate relationship lasting 6 months or more. Please answer all questions in this survey based on your **most recent** relationship that qualifies as a couple in this definition. If you were, but are no longer part of a couple, please answer the questions from when you were together, unless the question specifically asks for information about the time since the break-up.

45. What was the nature of your last such relationship?
0. We **are** married.
1. We **were** married, but are now divorced.
2. We **were** married, but are now separated.
3. We **were** married, but I am now widowed.
4. We are not married, but **are** living together.
5. We're not living together, but **have been** dating seriously for over a year.
6. We were not married, but **were** living together. Now, we've separated.
7. Other. Please specify _____

46. How long have you been or were you intimate partners (total time)?
0. Under 1 year
1. 1 year
2. 2 years
3. 3 years
4. 4 years
5. 5 years
6. 6 or 7 years
7. 8 to 10 years
8. 11 to 14 years
9. 15 to 19 years
10. 20 to 24 years
11. 25 years or more

47. What is your partner's current age?
0. 17-18
1. 19-20
2. 21-22
3. 23-24
4. 25-26
5. 27-29
6. 30-32
7. 33-36
8. 37-40
9. 41-44
10. 45-49
11. 50 or over

48. What branch of the military is your partner in (if any)?
0. Army
1. Air Force
3. Navy
4. Marines
5. He/She is not in the military. Skip to question #51 on this page.

49. What rank is your military partner?
0. Airman Basic, Airman, Airman First Class, or Senior Airman
1. Staff Sergeant or Technical Sergeant
2. Master Sergeant, Senior Master Sergeant, or Chief Master Sergeant
3. Second Lieutenant, First Lieutenant, or Captain
4. Major, Lieutenant Colonel, or Colonel
5. Brigadier General or above
6. Other. Please Specify: _____ .

50. How long has your partner been in the military?
0. Under six months
1. 6 months to 1 year
2. 1 to 3 years
3. 3 to 5 years
4. 5 to 7 years
5. 7 to 9 years
6. 9 to 11 years
7. 11 to 15 years
8. 15 to 21 years
9. Over 21 years

51. Over the duration of your relationship with your partner, how many times have you or did you relocate/move?
0. Never.
1. One
2. Two
3. Three or Four
4. Five or Six
5. Seven or Eight
6. Nine or Ten
7. Eleven or Twelve
8. Thirteen or Fourteen
9. Fifteen or more.

52. How long has it been since your last move?
0. Less than 6 months
1. 6-11 months
2. 1 year or longer but not 2 years
3. 2 years or longer but not 3 years
4. 3 years or longer but not 4 years
5. 4 years or longer but not 6 years
6. Over 6 years

53. In **the last 12 months** of your relationship, approximately how many days have you been separated (deployments, training, exercises, trips, remote assignments, etc.)?
0. None
1. 1-30
2. 31-60
3. 61-90
4. 91-120
5. 121-150
6. 151-180
7. 181-210
8. 211-240
9. More than 240

The following section of the survey includes some personal questions. Because the intent of this survey is to gather information on family violence, these types of questions are necessary and crucial. Please answer as many of them as you can. However, if you feel you absolutely cannot answer a question, please just skip it and continue the survey. Remember, this survey is completely anonymous and confidential. The procedure used to send out and receive the surveys, and even the questions themselves, were designed so that there would be no way to identify a participant.

54. Now, thinking about the whole time when you were a teenager, were there occasions when your father/stepfather hit your mother/stepmother or threw something at her that could have hurt her?
0. No.
1. Don't know.
2. Only had 1 parent/stepparent.
3. Yes, but only once.
4. Yes, twice.
5. Yes, 3 to 5 times.
6. Yes, 6 to 10 times.
7. Yes, 11 to 20 times.
8. Yes, more than 20 times.

55. What about your mother/stepmother hitting or throwing something that could hurt at your father/stepfather? Were there occasions when that happened when you were a teenager?

0. No.	**3.** Yes, but only once.	**6.** Yes, 6 to 10 times.
1. Don't know.	**4.** Yes, twice.	**7.** Yes, 11 to 20 times.
2. Only had 1 parent/stepparent.	**5.** Yes, 3 to 5 times.	**8.** Yes, more than 20 times.

56. Are there any situations you can imagine in which you would approve of a husband slapping his wife's face?

0. Yes.   **1.** No.   **2.** Not Sure.

57. Are there any situations you can imagine in which you would approve of a wife slapping her husband's face?

0. Yes.   **1.** No.   **2.** Not Sure.

Now let me ask you a few questions about you and your partner.

No matter how well a couple gets along, there are times when they disagree, get annoyed with the other person, or just have spats or fights because they're in a bad mood or tired for some reason. They also use many different ways of trying to settle their differences. Below, I'm going to present some things that you and your partner might do when you have an argument. I would like you to tell me how many times **in the past 12 months** these tactics have been used in your relationship. Each item has two parts: 1) How many times **you** have used a method in the past year, and 2) how many times **your partner** has used a method in the past year. If someone has not used a certain tactic in the past 12 months, the selections on the far right of the answer choices ask you to also answer if such a tactic has ever been used in the entire duration of your relationship.

	Number of Times Used in the Last **12 Months**						If this tactic has not been used in the last 12 months, has it _ever_ been used?	
	Once (1)	Twice (2)	3-5 Times (3)	6-10 Times (4)	11-20 Times (5)	Over 20 Times (6)	Yes, but over a year ago (7)	Never (0)
58. I explained my side of a disagreement to my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
59. My partner explained his or her side of a disagreement to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
60. I suggested a compromise to a disagreement.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
61. My partner suggested a compromise.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
62. I shouted or yelled at my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
63. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
64. I did something to spite my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
65. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
66. I insulted or swore at my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
67. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
68. I stomped out of the room or house or yard during a disagreement.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
69. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
70. I called my partner fat or ugly.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
71. My partner called me fat or ugly.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
72. I accused my partner of being a lousy lover.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
73. My partner accused me of this.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
74. I destroyed something belonging to my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
75. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
76. I threatened to hit or throw something at my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
77. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]

Some of the following questions will now have four parts. The first two parts are the same. They simply ask how many times you or your partner have used a certain "tactic". The third and fourth parts will then ask how many of the total times listed in the first two parts did you (or your partner) use the "tactic" purely in self-defense. For this survey, self-defense only includes **defending** yourself from physical injury resulting from a **physical** assault from your partner. It does **not** include retaliation, or "hitting them back" after they hit you first. Also, using a "tactic" to calm someone down, stop them from being hysterical, or prevent them from walking away is **not** considered self-defense in this questionnaire.

	Number of Times Used in the Last 12 Months						If this tactic has not been used in the last 12 months, has it ever been used?	
	Once (1)	Twice (2)	3-5 Times (3)	6-10 Times (4)	11-20 Times (5)	Over 20 Times (6)	Yes, but over a year ago (7)	Never (0)
A.								
78. I threw something at my partner that could hurt.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
79. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
80. Of the times **you** did this, how many times was it only in defending yourself against a physical assault?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
81. Of the times **your partner** did this, how many times was it only in self defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
B.								
82. I twisted my partner's arm or hair.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
83. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
84. How many of your uses of this tactic were only in self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
85. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
C.								
86. I pushed or shoved my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
87. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
88. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
89. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
D.								
90. I grabbed my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
91. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
92. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
93. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
E.								
94. I slapped my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
95. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
96. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
97. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
F.								
98. I used a knife or gun on my partner	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
99. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
100. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
101. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
G.								
102. I punched or hit my partner with something that could hurt.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
103. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
104. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
105. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
H.								
106. I choked my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
107. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
108. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
109. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]

	Number of Times Used in the Last 12 Months						If this tactic has not been used in the last 12 months, has it ever been used?	
	Once (1)	Twice (2)	3-5 Times (3)	6-10 Times (4)	11-20 Times (5)	Over 20 Times (6)	Yes, but over a year ago (7)	Never (0)
I.								
110. I slammed my partner against a wall.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
111. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
112. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
113. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
J.								
114. I burned or scalded my partner on purpose.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
115. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
116. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
117. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
K.								
118. I kicked my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
119. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
120. How many of your uses were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
121. How many of your partner's uses of this tactic were only self-defense?	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
L.								
122. I beat up my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
123. My partner did this to me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]

Results of Physical Incidents

124. I had a sprain, bruise, or small cut because of a fight with my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
125. My partner had a sprain, bruise, or small cut because of a fight with me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
126. I felt physical pain that still hurt the next day because of a fight with my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
127. My partner still felt physical pain the next day because of a fight we had.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
128. I went to a doctor because of a fight with my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
129. My partner went to a doctor because of a fight with me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
130. I needed to see a doctor because of a fight with my partner, but I didn't.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
131. My partner needed to see a doctor because of a fight with me, but didn't.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
132. I had a broken bone or passed out from a fight with my partner.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]
133. My partner had a broken bone or passed out from a fight with me.	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[0]

If you answered "never" (you marked **[0]**) for both you and your partner for all the items labeled **A** through **L** on the last two pages (questions 78-123), skip to part **C** at the middle of page 15. However, if you or your partner have ever used any of the 'tactics' from item A through to item L (at least one question from 78 to 123 is not marked **[0]**), please continue at the letter **A** on the top of the next page.

A.

134. How often is it that your partner was drinking right before a conflict resulting in a physical incident?

0. Never.	**2.** Half the time	**4.** 3 out of every 4 times
1. 1 out of every 4 times	**3.** 2 out of every 3 times	**5.** Just about every time

Where have you or your partner gone for treatment for family violence injuries (and how many times)?

	Never (0)	Once (1)	Twice (2)	3-5 Times (3)	More than 5 times (4)
135. Military hospital emergency room or overnight stay	[0]	[1]	[2]	[3]	[4]
136. Civilian hospital emergency room or overnight stay	[0]	[1]	[2]	[3]	[4]
137. Military doctor's office or clinic	[0]	[1]	[2]	[3]	[4]
138. Civilian doctor's office or clinic	[0]	[1]	[2]	[3]	[4]
139. Other. Please Specify_____.	[0]	[1]	[2]	[3]	[4]

140. If you or your partner used a civilian facility, did you do this partly to avoid the military becoming aware of the incident?
0. Yes.   **1.** No.

141. Have you **ever** used any of the following agencies (mark **all** that apply)?

A. I have never used any of these.	**F.** I have used a Shelter once.
B. I have used a Hotline once.	**G.** I have used a Shelter twice.
C. I have used a Hotline twice.	**H.** I have used a Shelter three times.
D. I have used a Hotline three times.	**I.** I have used a Shelter four or more times.
E. I have used a Hotline four or more times.	**J.** Other. Please Specify _____.

142. Try to think back to the **very first time** there was a physical fight between the two of you. The next set of questions concerns this **first incidence** of violence between the two of you. How long ago was that?

0. Less than 6 months	**3.** 18 months or longer but not 2 years	**6.** 4 to 5 years ago	**9.** 11 to 14 years ago
1. 6-11 months	**4.** 2 years or longer but not 3 years	**7.** 6 to 7 years ago	**10.** 15 to19 years ago
2. 12-17 months	**5.** 3 years or longer but not 4 years	**8.** 8 to 10 years ago	**11.** Over 20 years ago

143. Who actually used physical tactics in this very first physical incident between the two of you?
0. You.   **1.** Your Partner   **2.** Both

In the next few questions, I am asking about the number of **incidents** that have occurred during the length of your relationship, not the number of **tactics** used total as requested above. For example, if you have only had two fights that involved physical tactics, but in both fights you used five physical tactics, the number of **incidents** (as requested in this question) is **two** for the two fights.

144. How many separate **incidents** in which physical tactics were used have occurred in your relationship?

0. None	**2.** Two	**4.** Four	**6.** Nine to Twelve.	**8.** Twenty to Thirty
1. One	**3.** Three	**5.** Five to Eight	**7.** Thirteen to Twenty	**9.** More than Thirty

145. In how many of these incidents did **your partner** use the first physical tactic?

0. None	**2.** Two	**4.** Four	**6.** Nine to Twelve.	**8.** Twenty to Thirty
1. One	**3.** Three	**5.** Five to Eight	**7.** Thirteen to Twenty	**9.** More than Thirty

146. In how many of these incidents did **you** use the first physical tactic?

0. None	**2.** Two	**4.** Four	**6.** Nine to Twelve.	**8.** Twenty to Thirty
1. One	**3.** Three	**5.** Five to Eight	**7.** Thirteen to Twenty	**9.** More than Thirty

If your partner has ever been the first to use a physical tactic in a fight, please answer the following questions **thinking only** of these incidents in which **your partner** was the first to use physical tactics. (If your partner has **never** been the first to use physical tactics, disregard the wording of the following questions and answer them referring to the incidents in which you were the first to use physical tactics.

147. Did you tell anyone about the **first** incident in which **your partner** used a physical tactic on you in a fight (not including official agencies)? If so, who? (Mark **all** that apply)

A. Did not tell anyone.	**F.** Told a lawyer.
B. Told a friend or neighbor.	**G.** Told a member of the clergy.
C. Told a parent, brother, or sister.	**H.** Told your partner's sister/brother.
D. Told your partner's parents.	**I.** Told one of your partner's friends.
E. Told a psychologist.	**J.** Other. Please Specify _____.

8

148. Did you report this first incident to an official agency? If so which ones? (Mark **all** that apply)
   A. The military police
   B. The civilian police
   C. A medical doctor
   D. Family Advocacy
   E. Partner's Commander/First Sergeant.
   F. Partner's Supervisor.
   G. Other. Please Specify _____.
   H. Did not report it.
   I. We were not involved in the military then.

149. Did your partner report the incident to an official agency? If so, which one? (Mark **all** that apply)
   A. The military police
   B. The civilian police
   C. A medical doctor
   D. Family Advocacy
   E. Partner's Commander/First Sergeant.
   F. Partner's Supervisor.
   G. Other. Please Specify _____.
   H. Did not report it.
   I. We were not involved in the military then.

150. As far as you know, did anyone else report this incident to an official agency? (Mark **all** that apply)
   A. No.
   B. Yes, a neighbor reported it.
   C. Yes, a friend reported it. (If the person was a friend and a neighbor, please mark both)
   D. Yes, a co-worker (of you or your partner) reported it.
   E. Yes, a medical professional reported it to other agencies.
   F. Yes, someone else reported it, but they are not described above or you don't know who it was.

151. What official agencies eventually became involved in the incident (Mark **all** that apply).
   A. The military police
   B. The civilian police
   C. A medical doctor
   D. Family Advocacy
   E. Partner's Commander/First Sergeant.
   F. Other. Please Specify _____.
   G. None – Skip to question #166 on page 11.

152. If the **police** were involved (either military or civilian police), what did they do? (Mark **all** that apply)
   A. They were not involved. Skip to question #155 on the top of the next page.
   B. Broke up the fight.
   C. Tried to calm everyone down.
   D. Took time to listen to your story.
   E. Gave a verbal warning.
   F. Took information for a report.
   G. Ordered you out of the house.
   H. Ordered your partner out of the house.
   I. Took evidence.
   J. Promised further investigation of the incident.

153. (Continued) If the police were involved (either military or civilian police), what did they do? (Mark **all** that apply)
   K. Threatened to arrest someone if this happened again.
   L. Arrested your partner when they responded to the incident.
   M. Eventually arrested your partner (more than 6 hours after the incident was over).
   N. Arrested you (at the time or later).
   O. Listened to what you wanted done in the situation.
   P. Did, at least somewhat, what you asked them to do with the situation.
   Q. Listened to what your partner wanted done in the situation.
   R. Did, at least somewhat, what your partner asked them to do with the situation.
   S. Promised they would keep a watch on your residence for future trouble.
   T. Did nothing.

154. In general, what did you think of the **police** response to this incident?
   0. I was very dissatisfied - they should have been tougher.
   1. I was very dissatisfied - they should have been easier.
   2. I was somewhat dissatisfied - they should have been tougher.
   3. I was somewhat dissatisfied - they should have been easier.
   4. I was dissatisfied for other reasons.
   5. I was somewhat satisfied.
   6. I was very satisfied.
   7. I don't know.

9

155. If the **first sergeant or commander** was involved, what did they do at the time of the incident? (Mark **all** that apply) This only concerns actions around the time of the incident. Sanctions and punishments will be discussed later.
A. They were not involved. Skip to question #158 below.
B. Broke up the fight (if it was still going on).
C. Tried to calm everyone down.
D. Took time to listen to your story.
E. Ordered you out of the house.
F. Ordered your partner out of the house.
G. Referred you to another agency such as family advocacy.
H. Referred or directed your partner to another agency such as family advocacy.
I. Provided personal counseling to you (at the time or later).
J. Provided personal counseling to your partner (at the time or later).

156. More Options. If the first sergeant or commander were involved, what did they do (continued)? (Mark **all** that apply)
K. Gave a verbal warning.
L. Threatened to have one of you arrested if this happened again.
M. Promised further investigation of the incident.
N. Had you arrested.
O. Had your partner arrested.
P. Listened to what you wanted done in the situation.
Q. Did, at least somewhat, what you asked them to do with the situation.
R. Listened to what your partner wanted done in the situation.
S. Did, at least somewhat, what your partner asked them to do with the situation.
T. Nothing.

157. In general, what did you think of the **first sergeant/commander** initial response to this incident?
0. I was very dissatisfied - they should have been tougher.
1. I was very dissatisfied - they should have been easier.
2. I was somewhat dissatisfied - they should have been tougher.
3. I was somewhat dissatisfied - they should have been easier.
4. I was dissatisfied for other reasons.
5. I was somewhat satisfied.
6. I was very satisfied.
7. I don't know.

158. If **Family Advocacy** was involved, what did they do? (Mark **all** that apply)
A. They were not involved. Skip to question #161 below.
B. Tried to calm everyone down.
C. Took time to listen to your story.
D. Took information for a report.
E. Provided educational materials on family violence or family relations.
F. Threatened to have one of you arrested if this happened again.
G. Had you or you partner arrested.
H. Provided long term counseling on family violence or family relations for you.
I. Provided long term counseling on family violence or family relations for your partner.
J. Provided long term counseling on family violence or family relations for both of you together.

159. More Options. If the Family Advocacy was involved, what did they do (continued)? (Mark **all** that apply)
K. Provided training on stress management, alcohol abuse, parenting, etc. for you.
L. Provided training on stress management, alcohol abuse, parenting, etc. for your partner.
M. Provided other services for you (such as help finding another place to live, finding a job, etc.).
N. Listened to what you wanted done in the situation.
O. Did, at least somewhat, what you asked them to do with the situation.
P. Listened to what your partner wanted done in the situation.
Q. Did, at least somewhat, what your partner asked them to do with the situation.
R. Nothing.

160. In general, what did you think of the **Family Advocacy** response to this incident?
0. I was very dissatisfied - they should have been tougher.
1. I was very dissatisfied - they should have been easier.
2. I was somewhat dissatisfied - they should have been tougher.
3. I was somewhat dissatisfied - they should have been easier.
4. I was dissatisfied for other reasons.
5. I was somewhat satisfied.
6. I was very satisfied.
7. I don't know.

161. If this incident resulted in sanctions/punishments for one or both of you, who received them?
0. You
1. Your Partner
2. Both
3. There were no punishments/sanctions. (Skip to question #164 in the middle of the next page.)

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162. What **sanctions or punishments** were used (Mark **all** that apply).
  A. None. (If none, skip to question #164 below.)
  B. A period of mandated separation of less than 36 hours.
  C. A period of mandated separation of between 36 hours and 7 days.
  D. A period of mandated separation over 7 days.
  E. Mandatory Counseling
  F. A official letter of Counseling
  G. An official letter of Reprimand
  H. A Letter of Counseling or Reprimand that was later destroyed.
  I. An Article 15.
  J. Establishment of a UIF and placement on a control roster.

163. More Options. What sanctions or punishments were used? (continued) (Mark **all** that apply)
  K. A rank reduction, fine, or pay forfeiture.
  L. A suspended rank reduction, fine, or forfeiture of pay.
  M. Time in confinement. (over 3 days)
  N. Suspended time in confinement.
  O. Extra duty time or community service (Under 100 hours)
  P. Extra duty time or community service (Over 100 hours)
  Q. Dismissal from military service (honorably).
  R. Dismissal from military service (other than honorably).
  S. A period of probation.
  T. Other. Please Specify _____ .

164. What did you think of the severity of the **sanctions/punishments** given (or not given) in this incident?
  0. I was very dissatisfied - they should have been tougher.   4. I was dissatisfied for other reasons.
  1. I was very dissatisfied - they should have been easier.   5. I was somewhat satisfied.
  2. I was somewhat dissatisfied - they should have been tougher.   6. I was very satisfied.
  3. I was somewhat dissatisfied - they should have been easier.   7. I don't know.

165. In general, what did you think of the **overall response of all of the official agencies involved** in this incident?
  0. I was very dissatisfied - they should have been tougher.   4. I was dissatisfied for other reasons.
  1. I was very dissatisfied - they should have been easier.   5. I was somewhat satisfied.
  2. I was somewhat dissatisfied - they should have been tougher.   6. I was very satisfied.
  3. I was somewhat dissatisfied - they should have been easier.   7. I don't know.

166. After this first incident, how likely are/were you to report to an official agency if a second incident occurred?
  0. Would not report. (0% chance)
  1. It is very unlikely that I would report. (20% chance)
  2. It is unlikely that I would report (30% chance)
  3. There is a possibility that I would report. (40% chance)
  4. I don't know. It would be a tough decision. (50/50% chance)
  5. It would be a close call but I would probably report. (60% chance)
  6. It is likely that I would report. (70% chance)
  7. It is very likely that I would report (80% chance)
  8. I would definitely report. (100% chance)
  9. I really have no idea of whether I would report or not.

167. Has there ever been a second incident in which **your partner** was the **first** person to use physical tactics?
  0. Yes.
  1. Not in which he/she used them first, but there was a later incident in which he/she used them after I started using them.
  2. No, my partner has never again used physical tactics. Please skip to question #195 on page 15.

The next sequence of questions are all referring to this **second** incident of physical violence by your partner.

168. Who actually used physical tactics in this second incident?
  0. You   1. Your Partner   2. Both

169. How long after the **first incident** did the **second incident** occur?
  0. 1-5 days   3. About 3 weeks   6. 2 to 3 months   9. 9 to 12 months   12. 5 to 7 years
  1. 6-10 days   4. About 4 weeks   7. 4 to 6 months   10. 1 to 2 years   13. 7 to 10 years
  2. About 2 weeks 5. 30-60 days   8. 7 to 9 months   11. 3 to 4 years   14. Over 10 years

170. How many physical **incidents** (in the A to L range on pages 6-7) occurred in the 12 months after the first incident?

0. None.	**2.** Two.	**4.** Four.	**6.** Six to Nine	**8.** Fifteen to Twenty
1. One.	**3.** Three.	**5.** Five.	**7.** Ten to Fourteen.	**9.** Over Twenty.

171. Did you tell anyone about this **second** incident (not including official agencies)? If so, who? (Mark **all** that apply)

A. Did not tell anyone.	**E.** Told your partner's parents.	**I.** Told your partner's sister/brother.
B. Told a friend.	**F.** Told a psychologist.	**J.** Told one of your partner's friends.
C. Told a neighbor.	**G.** Told a parent, brother, or sister.	**K.** Other. Please Specify_____ .
D. Told a lawyer.	**H.** Told a member of the clergy.	

172. Did you report this second incident to an official agency? If so which ones? (Mark **all** that apply)

A. The military police	**D.** Family Advocacy	**G.** Other. Please Specify _____.
B. The civilian police	**E.** Partner's Commander/First Sergeant.	**H.** Did not report it.
C. A medical doctor	**F.** Partner's Supervisor.	**I.** We were not involved in the military then.

173. Did you partner report this second incident to an official agency? If so, which one? (Mark **all** that apply)

A. The military police	**D.** Family Advocacy	**G.** Other. Please Specify _____.
B. The civilian police	**E.** Partner's Commander/First Sergeant.	**H.** Did not report it.
C. A medical doctor	**F.** Partner's Supervisor.	**I.** We were not involved in the military then.

174. As far as you know, did anyone else report this incident to an official agency? (Mark **all** that apply)
A. No.
B. Yes, a neighbor reported it.
C. Yes, a friend reported it. (If the person was a friend and a neighbor, please mark both)
D. Yes, a co-worker (of you or your partner) reported it.
E. Yes, someone else reported it, but they are not described above or you don't know who it was.

175. What **official agencies** eventually became involved in this incident (Mark **all** that apply).

A. The military police	**E.** Partner's Commander/First Sergeant.
B. The civilian police	**F.** Other. Please Specify _____.
C. A medical doctor	**G.** None. Skip to question #190 on page 14.
D. Family Advocacy	

176. If the **police** were involved (either military or civilian police), what did they do? (Mark **all** that apply)
A. They were not involved. Skip to question #179 on the top of the next page.
B. Broke up the fight.
C. Tried to calm everyone down.
D. Took time to listen to your story.
E. Gave a verbal warning.
F. Took information for a report.
G. Ordered you out of the house.
H. Ordered your partner out of the house.
I. Took evidence.
J. Promised further investigation of the incident.

177. (Continued) If the police were involved (either military or civilian police), what did they do? (Mark **all** that apply)
K. Threatened to arrest someone if this happened again.
L. Arrested your partner when they responded to the incident.
M. Eventually arrested your partner (more than 6 hours after the incident was over).
N. Arrested you (at the time or later).
O. Listened to what you wanted done in the situation.
P. Did, at least somewhat, what you asked them to do with the situation.
Q. Listened to what your partner wanted done in the situation.
R. Did, at least somewhat, what your partner asked them to do with the situation.
S. Promised they would keep a watch on your residence for future trouble.
T. Did nothing.

178. In general, what did you think of the **police** response to this incident?

0. I was very dissatisfied - they should have been tougher.	**4.** I was dissatisfied for other reasons.
1. I was very dissatisfied - they should have been easier.	**5.** I was somewhat satisfied.
2. I was somewhat dissatisfied - they should have been tougher.	**6.** I was very satisfied.
3. I was somewhat dissatisfied - they should have been easier.	**7.** I don't know.

179. If the **first sergeant or commander** was involved, what did they do at the time of the incident? (Mark **all** that apply) This only concerns actions around the time of the incident. Sanctions will be discussed later.
    A. They were not involved. Skip to question #182 below.
    B. Broke up the fight (if it was still going on).
    C. Tried to calm everyone down.
    D. Took time to listen to your story.
    E. Ordered you out of the house.
    F. Ordered your partner out of the house.
    G. Referred you to another agency such as family advocacy.
    H. Referred or directed your partner to another agency such as family advocacy.
    I. Provided personal counseling to you (at the time or later).
    J. Provided personal counseling to your partner (at the time or later).

180. More Options. If the first sergeant or commander were involved, what did they do (continued)? (Mark **all** that apply)
    K. Gave a verbal warning.
    L. Threatened to have one of you arrested if this happened again.
    M. Promised further investigation of the incident.
    N. Had you arrested.
    O. Had your partner arrested.
    P. Listened to what you wanted done in the situation.
    Q. Did, at least somewhat, what you asked them to do with the situation.
    R. Listened to what your partner wanted done in the situation.
    S. Did, at least somewhat, what your partner asked them to do with the situation.
    T. Nothing.

181. In general, what did you think of the **first sergeant/commander** initial response to this incident?
    0. I was very dissatisfied - they should have been tougher.
    1. I was very dissatisfied - they should have been easier.
    2. I was somewhat dissatisfied - they should have been tougher.
    3. I was somewhat dissatisfied - they should have been easier.
    4. I was dissatisfied for other reasons.
    5. I was somewhat satisfied.
    6. I was very satisfied.
    7. I don't know.

182. If **Family Advocacy** was involved, what did they do? (Mark **all** that apply)
    A. They were not involved. Skip to question #185 below.
    B. Tried to calm everyone down.
    C. Took time to listen to your story.
    D. Took information for a report.
    E. Provided educational materials on family violence or family relations.
    F. Threatened to have one of you arrested if this happened again.
    G. Had you or you partner arrested.
    H. Provided long term counseling on family violence or family relations for you.
    I. Provided long term counseling on family violence or family relations for your partner.
    J. Provided long term counseling on family violence or family relations for both of you together.

183. More Options. If the Family Advocacy was involved, what did they do (continued)? (Mark **all** that apply)
    K. Provided training on stress management, alcohol abuse, parenting, etc. for you.
    L. Provided training on stress management, alcohol abuse, parenting, etc. for your partner.
    M. Provided other services for you (such as help finding another place to live, finding a job, etc.).
    N. Listened to what you wanted done in the situation.
    O. Did, at least somewhat, what you asked them to do with the situation.
    P. Listened to what your partner wanted done in the situation.
    Q. Did, at least somewhat, what your partner asked them to do with the situation.
    R. Nothing.

184. In general, what did you think of the **Family Advocacy** response to this incident?
    0. I was very dissatisfied - they should have been tougher.
    1. I was very dissatisfied - they should have been easier.
    2. I was somewhat dissatisfied - they should have been tougher.
    3. I was somewhat dissatisfied - they should have been easier.
    4. I was dissatisfied for other reasons.
    5. I was somewhat satisfied.
    6. I was very satisfied.
    7. I don't know.

185. If this incident resulted in sanctions/punishments for one or both of you, who received them?
    0. You
    1. Your Partner
    2. Both
    3. There were no punishments/sanctions. (Skip to question #188 in the middle of the next page.)

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186. What **sanctions or punishments** were used (Mark **all** that apply).
    A. None. (Skip to question #188 below.)
    B. A period of mandated separation of less than 36 hours.
    C. A period of mandated separation of between 36 hours and 7 days.
    D. A period of mandated separation over 7 days.
    E. Mandatory Counseling
    F. A official letter of Counseling
    G. An official letter of Reprimand
    H. A Letter of Counseling or Reprimand that was later destroyed.
    I. An Article 15.
    J. Establishment of a UIF and placement on a control roster.

187. More Options. What sanctions or punishments were used? (continued) (Mark **all** that apply)
    K. A rank reduction, fine, or pay forfeiture.
    L. A suspended rank reduction, fine, or forfeiture of pay.
    M. Time in confinement. (over 3 days)
    N. Suspended time in confinement.
    O. Extra duty time or community service (Under 100 hours)
    P. Extra duty time or community service (Over 100 hours)
    Q. Dismissal from military service (honorably).
    R. Dismissal from military service (other than honorably).
    S. A period of probation.
    T. Other. Please Specify _____ .

188. What did you think of the severity of the **sanctions/punishments** given (or not given) in this incident?
    0. I was very dissatisfied - they should have been tougher.   4. I was dissatisfied for other reasons.
    1. I was very dissatisfied - they should have been easier.   5. I was somewhat satisfied.
    2. I was somewhat dissatisfied - they should have been tougher. 6. I was very satisfied.
    3. I was somewhat dissatisfied - they should have been easier. 7. I don't know.

189. In general, what did you think of the **overall response of all of the official agencies involved** in this incident?
    0. I was very dissatisfied - they should have been tougher.   4. I was dissatisfied for other reasons.
    1. I was very dissatisfied - they should have been easier.   5. I was somewhat satisfied.
    2. I was somewhat dissatisfied - they should have been tougher. 6. I was very satisfied.
    3. I was somewhat dissatisfied - they should have been easier. 7. I don't know.

190. After this second incident, how likely are/were you to report to an official agency if a third incident occurred?
    0. Would not report. (0% chance)
    1. It is very unlikely that I would report. (20% chance)
    2. It is unlikely that I would report (30% chance)
    3. There is a possibility that I would report. (40% chance)
    4. I don't know. It would be a tough decision. (50/50% chance)
    5. It would be a close call but I would probably report. (60% chance)
    6. It is likely that I would report. (70% chance)
    7. It is very likely that I would report (80% chance)
    8. I would definitely report. (100% chance)
    9. I really have no idea of whether I would report or not.

191. Has there ever been a **third** incident in which your partner was the **first** person to use physical tactics?
    0. Yes.
    1. No, not in which he/she used them first, but there was a later incident in which he/she used them after I started using them.
    2. No, my partner has never again used physical tactics. Skip to question #195 on the top of the next page.

192. Who actually used physical tactics in this third incident?
    0. You   1. Your Partner   2. Both

193. How long after the second **incident** did the third incident occur?
    0. 1-5 days   3. About 3 weeks   6. 2 to 3 months   9. 9 to 12 months   12. 5 to 7 years
    1. 6-10 days   4. About 4 weeks   7. 4 to 6 months   10. 1 to 2 years   13. 7 to 10 years
    2. About 2 weeks   5. 30-60 days   8. 7 to 9 months   11. 3 to 4 years   14. Over 10 years

194. How many physical **incidents** (in the A to L range on pages 6-7) occurred in the 12 months after the second incident?
    0. None.   2. Two.   4. Four.   6. Six to Nine   8. Fifteen to Twenty
    1. One.   3. Three.   5. Five.   7. Ten to Fourteen.   9. Over Twenty.

14

195. How many times have you reported physical incidents to the following official agencies? Do not include reports about others (neighbors, friends, etc.) but only reports about incidents in which you were a participant. (Mark **all** that apply)
    A. Never - to any agency.
    B. Once - to the military police.
    C. Once - to Family Advocacy.
    D. Once - to the Commander/1st Sgt.
    E. Twice - to the military police.
    F. Twice - to Family Advocacy.
    G. Twice - to the Commander/1st Sgt.
    H. Three or more times - to the military police.
    I. Three or more times - to Family Advocacy.
    J. Three or more times - to the Commander/1st Sgt.

196. If you have ever reported a physical incident (in which you were a participant) to an official agency, what factors were important in convincing you to report? If you have never reported to an official agency, please skip to the next question. (Mark **all** that apply)
    A. You were afraid of your partner.
    B. Things were getting worse.
    C. You wanted to get help for yourself.
    D. You wanted to get help for your partner.
    E. You wanted to get help for both of you.
    F. You were afraid for your family.
    G. Information on what would happen when you reported.
    H. Information on what services (counseling, etc.) were available.
    I. The advice of a friend or neighbor
    J. You wanted to keep it from happening again.

C.

197. Some people are afraid that their partners will hit them if they argue with her/him or do something he/she doesn't like. How much would you say you are afraid of this?
    0. Not at all.
    1. A little.
    2. Quite a bit.
    3. Very afraid it will happen

198. How often do you interact with other military spouses or military members other than your partner?
    0. Almost never.
    1. Once or twice a month.
    2. About once a week.
    3. Several times a week.
    4. About once a day.
    5. More than once a day.

E.

199. In the last 4 years, did you ever have strong reason to believe that any of your **neighbors or friends** had experienced family violence as a victim or aggressor (family violence meaning the use of physical tactics as we saw above) ?
    0. No.
    1. Yes, I have had strong reason to believe this about **1** couple in the last 4 years.
    2. Yes, I have had strong reason to believe this about **2** couples in the last 4 years.
    3. Yes, I have had strong reason to believe this about **3** couples in the last 4 years.
    4. Yes, I have had strong reason to believe this about **4 or more** couples in the last 4 years.

200. Have you ever reported violence you believed was going on in **another couple's** relationship to **an official agency**?
    0. No. You may skip to question #202 below.
    1. Yes, I reported about a neighbor.
    2. Yes, I reported about a friend.
    3. Yes, I reported about a co-worker.
    4. Yes, I reported about someone not listed above.

201. How many times have you reported to one of the following official agencies about violence you thought or knew was going on in **another couple's** relationship? (Mark **all** that apply)
    A. Never - to any agency.
    B. Once - to the military police.
    C. Once - to Family Advocacy.
    D. Once - to the Commander/1st Sgt.
    E. Twice - to the military police.
    F Twice - to Family Advocacy.
    G. Twice - to the Commander/1st Sgt.
    H. Three or more times - to the military police.
    I. Three or more times - to Family Advocacy.
    J. Three or more times - to the Commander/1st Sgt.

202. In the last year, have you ever had or done any of the following. (Mark **all** that apply)
    A. Severe depression.
    B. Felt helpless.
    C. Thought about taking you own life.
    D. Attempted to take your own life.
    E. None of the above.

203. What type of housing do you live in? (on base, off base, other government quarters, etc.)
    0. In military housing on the main base
    1. In a military family housing complex that is not on the main base.
    2. Off base
    3. On base, in other housing. Please Specify _____.

204. What social groups are you involved in and how involved are you in these groups? (Mark **all** that apply)
- **A.** Church - very involved.
- **B.** Church - a little involvement.
- **C.** A spouses group/club - very involved.
- **D.** A spouses group/club - a little involvement.
- **E.** Socializing with co-workers - very involved.
- **F.** Socializing with co-workers - a little involvement.
- **G.** Another (unlisted) social group - very involved.
- **H.** Another (unlisted) social group - a little involvement.
- **I.** None.

205. Are you:
- **0.** Employed full time
- **1.** Employed part time
- **2.** Retired.
- **3.** A full-time homemaker.
- **4.** Employed at more than one job.
- **5.** A student
- **6.** Disabled and cannot work.
- **7.** Unemployed.
- **8.** Other. Please Explain _____.

206. What branch of the military are you in, if any?
- **0.** I am not in the military.
- **1.** Air Force
- **2.** Marines
- **3.** Navy
- **4.** Army

207. Was your father or mother in the military?
- **0.** Yes, for less than 5 years.
- **1.** Yes, for between 5 and 15 years.
- **2.** Yes, they had a career in and retired from the military.
- **3.** No.

208. What is your **personal** annual income? Please exclude any income from your partner.
- **0.** Under $2,000
- **1.** $2,000-$4,999
- **2.** $5,000-$7,999
- **3.** $8,000-$11,999
- **4.** $12,000-$15,999
- **5.** $16,000-$19,999
- **6.** $20,000-29,999
- **7.** $30,000-39,999
- **8.** $40,000-$49,999
- **9.** $50,000-$64,999
- **10.** $65,000-$79,999
- **11.** $80,000 or more

209. In which of the following categories do you feel that you belong, if any?
- **0.** Pacific Islander
- **1.** Asian (Oriental)
- **2.** Hispanic
- **3.** Hispanic/Black
- **4.** White, but not Hispanic
- **5.** Black, but not Hispanic
- **6.** American Indian or Alaskan native.
- **7.** Not sure
- **8.** Other. Please Specify_____.

210. What is the last year or grade of school you completed?
- **0.** No formal schooling
- **1.** 1st through 7th grade
- **2.** 8th grade
- **3.** Some high school
- **4.** High-school graduate
- **5.** Some college
- **6.** Associate program graduate
- **7.** Four year college graduate
- **8.** Some post-baccalaureate degree training
- **9.** Hold advanced degree

211. What is your religious preference?
- **0.** Atheist.
- **1.** Catholic.
- **2.** Muslim.
- **3.** Buddhist.
- **4.** Protestant
- **5.** Jewish
- **6.** None.
- **7.** Other. Please Specify _____.

If you are not and have not in the last seven years been a member of a couple (in other words, you have no partner to answer questions about), you may turn to the next page and read the instructions marked "STOP - END OF SURVEY". If you are or have been a member of a couple and have been answering questions about your partner throughout this survey, please continue with question #211 below.

212. What is/was your approximate annual **household** income? If you and your partner do not or did not share a household (i.e. dating relationships), mark that below.
- **0.** Did not share a household.
- **1.** Under $12,000
- **2.** $12,000-$16,999
- **3.** $17,000-$21,999
- **4.** $22,000-$26,999
- **5.** $27,000-$33,999
- **6.** $34,000-40,999
- **7.** $41,000-49,999
- **8.** $50,000-$69,999
- **9.** $70,000-$89,999
- **10.** $90,000-$119,999
- **11.** $120,000 or more

213. How would your partner likely describe his/her position at work. "In my job, I..."
- **0.** have the power to make many decisions and have lots of autonomy.
- **1.** can make certain decisions within the limits set for me by others.
- **2.** have very little choice in decision making, but can often speak my mind on issues.
- **3.** have almost no choice in decision making, but can sometimes provide feedback on issues.
- **4.** have almost no choice in decision making and am rarely allowed a chance to give any feedback.
- **5.** have no choice in decision making and am forced to always follow orders as given.

214. In which of the following categories do you feel that your intimate partner belongs?
- **0.** Pacific Islander
- **1.** Asian (Oriental)
- **2.** Hispanic
- **3.** Hispanic/Black
- **4.** White, but not Hispanic
- **5.** Black, but not Hispanic
- **6.** American Indian or Alaskan native.
- **7.** Not sure
- **8.** Other. Please Specify_____.

215. What is the last year or grade of school your partner completed?
- **0.** No formal schooling
- **1.** 1st through 7th grade
- **2.** 8th grade
- **3.** Some high school
- **4.** High-school graduate
- **5.** Some college
- **6.** Associate program graduate
- **7.** Four year college graduate
- **8.** Some post-baccalaureate degree training
- **9.** Hold advanced degree

216. In general, how often does your partner consume alcoholic beverages, that is, beer, wine, or liquor?
- **0.** Never. Skip to question #217
- **1.** Less then 1 day a month
- **2.** 1-3 days a month
- **3.** 1-2 days a week
- **4.** 3-4 days a week
- **5.** 5-6 days a week
- **6.** Daily

217. How often **in the past year**, if ever, did your partner get intoxicated (enough that they would not be legal to drive)?
- **0.** Never
- **1.** Several times a year
- **2.** Once a month
- **3.** 2-3 times a month
- **4.** Once a week
- **5.** Twice a week
- **6.** 3-5 times a week
- **7.** On most days

218. What is your partner's religious preference?
- **0.** Atheist.
- **1.** Catholic.
- **2.** Muslim.
- **3.** Buddhist.
- **4.** Protestant
- **5.** Jewish
- **6.** None.
- **7.** Other. Please Specify _____.

219. If the couple is no longer intact, how long has it been since you separated?
- **0.** We are still together.
- **1.** Less than 1 month
- **2.** 1 to 2 months
- **3.** 3 to 5 months
- **4.** 6 to 8 months
- **5.** 9 to 11 months
- **6.** 1 year
- **7.** 2 years
- **8.** 3 or 4 years
- **9.** 5 to 7 years
- **10.** 8 to 10 years
- **11.** 11 or more years

220. How long have you lived (or did you live) together?
- **0.** Under 1 year
- **1.** 1 year
- **2.** 2 years
- **3.** 3 years
- **4.** 4 years
- **5.** 5 to 6 years
- **6.** 7 to 8 years
- **7.** 9 to 11 years
- **8.** 12 to 14 years
- **9.** 15 to 18 years
- **10.** 19 to 22 years
- **11.** 23 years or more

221. How many children under the age of 18 live/lived in your house in the last year?
- **0.** None. Skip to question #222.
- **1.** One
- **2.** Two
- **3.** Three
- **4.** Four
- **5.** Five
- **6.** Six
- **7.** Seven or more.

222. How many of these children are offspring from your present relationship?
- **0.** None
- **1.** One
- **2.** Two
- **3.** Three
- **4.** Four
- **5.** Five
- **6.** Six
- **7.** Seven or more.

223. Are you/your partner pregnant and if so, how far along?
- **0.** Not pregnant.
- **1.** 1 month
- **2.** 2 months
- **3.** 3 months
- **4.** 4 months
- **5.** 5 months
- **6.** 6 months
- **7.** 7 months
- **8.** 8 months
- **9.** 9 or more months

STOP - END OF SURVEY

Thank you very much for completing this survey. I understand that much of the information was personal and I appreciate you sharing it. I assure you again that your answers will be read only by researchers, will be kept completely confidential, and that no attempt will be made to identify you or your partner.

If you have any comments about this survey, or you would like to make any other remarks about this topic, the following two pages have been left blank for this purpose. When you are finished, please put the completed questionnaire into the included return envelope. You do not need to return the cover letter and can simply throw it away. The return envelope is already stamped and addressed, so please just seal it and drop it in the mail. Thanks again. The information you have provided will undoubtedly help us in our attempts to help military families.

APPENDIX B

DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AFB, OH

4 Aug 97

MEMORANDUM FOR Spouse or Partner of Air Force Member

FROM: Captain Heath Graves

SUBJECT: Military Couple Questionnaire

1. I know we all get plenty of worthless junk in the mail, but I ask that you please read through this letter before deciding if you are going to fill out this questionnaire or throw it away. I am an Air Force captain and, together with researchers at Virginia Commonwealth University, I am investigating ways to help couples experiencing violence in their relationships. For this reason, we are asking for your help in answering some important questions about how we handle these situations in the Air Force. Your participation is vital to helping these couples who are having problems. Without your help, this research cannot succeed.

2. This questionnaire is designed to be answered by the **spouse** or **partner** of an Air Force member, not by the military members themselves. Also, please fill out this questionnaire even if you have never had this problem, because we also need to know what is working and how couples who do not have violence in their relationship differ from couples that do. Finally, this research **does not** cover relationships with children.

3. The enclosed questionnaire is **completely anonymous**. It does not have a "code number" and the questions are designed so that there is no way a particular respondent can be identified. For instance, the questionnaire will not ask for your partner's unit. For the same reason, there is no place for a return address on the enclosed, pre-stamped envelope. Just drop it in the mail. When it is returned to me, it will look just like every other returned survey. I do not need to know who you are, but I do badly need your help in filling out this questionnaire completely and honestly.

4. Again, the data we ask for in this questionnaire is critical to helping couples who are experiencing violence in the home. For instance, we are looking at the things that discourage couples from getting help, such as the possible effects on a military member's career. We want to know if there are better ways for the Air Force to handle these situations, such as giving the victim more say, or limiting adverse career actions when a family voluntarily reports a problem, so that these couples would be more willing to get help.

5. This questionnaire usually takes **less than 25 minutes**. In fact, most people will be asked to skip many of the questions. **Please do not throw this questionnaire away.** Even if you cannot complete it fully, please do as much as you can and send it back. We have invested a lot of money into this project in the hopes that we can help military families. Each unreturned survey takes away from that effort. We wish that we could provide adequate compensation for your time, but frankly, we just could not afford it. However, we sincerely believe your investment of time will pay large dividends in improving what we know about handling partner violence and will therefore help many families in ways that are worth a great deal more than money.

6. If you have any questions, or to request a copy of the study's conclusions, my telephone number is (804) 553-3916. Feel free to call collect. Thank you very much for helping with this important project.

DR. LAURA J. MORIARTY
Researcher and Professor
Virginia Commonwealth University

ELLIOT H. GRAVES, Capt, USAF
Air Force Institute of Technology

Global Power For America

APPENDIX C

DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AFB, OH

4 Aug 97

MEMORANDUM FOR Spouse or Partner of Air Force Member

FROM: Captain Heath Graves

SUBJECT: Military Couple Questionnaire

1. I know we all get plenty of worthless junk in the mail, but I ask that you please read through this letter before deciding if you are going to fill out this questionnaire or throw it away. I am an Air Force captain and, together with researchers at Virginia Commonwealth University, I am investigating ways to help couples experiencing violence in their relationships. For this reason, we are asking for your help in answering some important questions about how we handle these situations in the Air Force. Your participation is vital to helping these couples who are having problems. Without your help, this research cannot succeed.

2. This questionnaire is designed to be answered by the **spouse** or **partner** of an Air Force member, not by the military members themselves. Also, please fill out this questionnaire even if you have never had this problem, because we also need to know what is working and how couples who do not have violence in their relationship differ from couples that do. Finally, this research **does not** cover relationships with children.

3. The enclosed questionnaire is **completely anonymous**. It does not have a "code number" and the questions are designed so that there is no way a particular respondent can be identified. For instance, the questionnaire will not ask for your partner's unit. For the same reason, there is no place for a return address on the enclosed, pre-stamped envelope. Just drop it in the mail. When it is returned to me, it will look just like every other returned survey. I do not need to know who you are, but I do badly need your help in filling out this questionnaire completely and honestly.

4. Again, the data we ask for in this questionnaire is critical to helping couples who are experiencing violence in the home. For instance, we are looking at the things that discourage couples from getting help, such as the possible effects on a military member's career. We want to know if there are better ways for the Air Force to handle these situations, such as giving the victim more say, or limiting adverse career actions when a family voluntarily reports a problem, so that these couples would be more willing to get help.

5. This questionnaire usually takes **less than 25 minutes**. In fact, most people will be asked to skip many of the questions. **Please do not throw this questionnaire away**. Even if you cannot complete it fully, please do as much as you can and send it back. We have invested a lot of money into this project in the hopes that we can help military families. Each unreturned survey takes away from that effort. We have included a coupon as a small token of our thanks. We wish that we could provide adequate compensation for your time, but frankly, we just could not afford it. However, we sincerely believe your investment of time will pay large dividends in improving what we know about handling partner violence and will therefore help many families in ways that are worth a great deal more than money.

6. If you have any questions, or to request a copy of the study's conclusions, my telephone number is (804) 553-3916. Feel free to call collect. Thank you very much for helping with this important project.

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Virginia Commonwealth University

ELLIOT H. GRAVES, Capt, USAF
Air Force Institute of Technology

Global Power For America

APPENDIX D

DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AFB, OH

9 Aug 97

MEMORANDUM FOR   Military Couple Questionnaire Respondent

FROM: Captain Elliot H. Graves

SUBJECT: Follow-up on Military Couple Questionnaire (USAF Survey Control Number 97-46)

1.   This letter is a follow-up to the Military Couple Questionnaire that you should have received in the mail approximately a week ago. As was explained in that material, this survey is completely anonymous. Because of this, there is no way for me to determine who has or has not completed this survey. For this reason, this reminder letter is being sent to everyone who was selected to participate in this study.

2.   First, if you have already returned the questionnaire, let me express my sincere thanks. The information you have contributed is the cornerstone of our research into helping Air Force couples experiencing violence. Rest assured that the data you and others have provided will be carefully examined and utilized by myself and the researchers at Virginia Commonwealth University. If you have not returned your questionnaire, I ask that you make every attempt to complete it. I would not be sending this reminder letter if your answers were not vital and necessary to this project and its goal of helping these couples. For this reason, I ask that you donate 20 minutes of your time to supporting this effort. **Even if you cannot fill out the full survey, please take the time now to fill out as much as you can and return it in the pre-stamped envelope provided.**

3.   **It is important that you answer this survey even if you have no experience with this type of problem.** There are two reasons for this. First, most statistics require that the group of returned surveys represents all types of people. Without such a diverse sample, the results would not be representative of the entire Air Force, rendering this study largely ineffective. Also, if we only received replies from people who had experienced this problem, we would have nothing to compare this group's responses to. In this case, we might know that this "violence-experienced" group's partners became intoxicated an average of 2.2 times per week. However, without other data to compare this to, this number is useless. Suppose the average among those without this problem is also 2.2 times per week. Then alcohol doesn't seem to be a factor. But if the average in the group without violence is 1.1 times per week, the data takes on an entirely new meaning.

4.   **In short, it is vital that you return your survey so that all groups and points of view are represented, and to make this study effective in helping Air Force families.** I wish I had some way to compensate you for your time, because I know that time is at a premium in every Air Force family. However, I have found no feasible way to do this. All I can offer is the promise that the information gained from this study will be closely examined with the goal of identifying the best ways to help troubled families.

5.   Thank you for your time and attention. If you have misplaced your original survey, or you never received one, please give me a call at (804) 553-3916 and I will be happy to send you another. Feel free to call collect, telling the operator that you are a "survey respondent". You may also call this number if you have questions, comments, or are interested in receiving a copy of the results of this study. Thanks again for your time.

Elliot H. Graves

ELLIOT H. GRAVES, Capt, USAF
Air Force Institute of Technology

Global Power For America

APPENDIX E

DEPARTMENT OF THE AIR FORCE
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AFB, OH

28 Aug 97

MEMORANDUM FOR   Selected Questionnaire Respondent

FROM: Captain Elliot H. Graves

SUBJECT: Second Follow-up on Military Couple Questionnaire (USAF Control Number 97-46)

1.   This letter is a second follow-up to the Military Couple Questionnaire that you should have received in the mail about four weeks ago. As was explained then, **this research is completely anonymous in order to protect your answers**. Because of this, there is no way for us to determine who has or has not completed this survey. For this reason, this reminder letter is being sent to everyone who was selected to participate in this study.

2.   First, we apologize for having to bother everyone again. However, due to summer vacations, the August rush of children beginning school, and the effects of the UPS strike on the US Postal Service, many may not have received the previous mailings, or may not have had time to carefully read them when they arrived. This has resulted in a survey response significantly below our goal. Also, because of this low response, we are concerned that many points of view are not currently represented.

3.   **If you have already completed and returned the questionnaire, thank you.** The data you have provided is the key component in this effort to help Air Force couples. For those who have received, but have not been able to complete the questionnaire, **we ask that you take 12 minutes and attempt to complete as many questions as you can. If you are not done at the end of 12 minutes, feel free to stop and return the questionnaire "as is" in the pre-stamped envelope provided.** You will not be bothered again. However, without your help, this research project cannot succeed.

4.   Thank you for your time and attention. We understand that quite a few people never received the original questionnaire packet. **If you did not receive this packet, or if you have misplaced your original survey, please give us a call at (804) 553-3916 and we will be happy to send you another. Feel free to call collect.** You may also call this number if you have questions or comments, or are interested in receiving a copy of the results of this study. Thanks again for your time.

DR. LAURA J. MORIARTY
Researcher and Professor
Virginia Commonwealth University

ELLIOT H. GRAVES, Capt, USAF
Air Force Institute of Technology

Global Power For America

APPENDIX F

Cumulative Response Curve for Survey

Surveys Received by Date
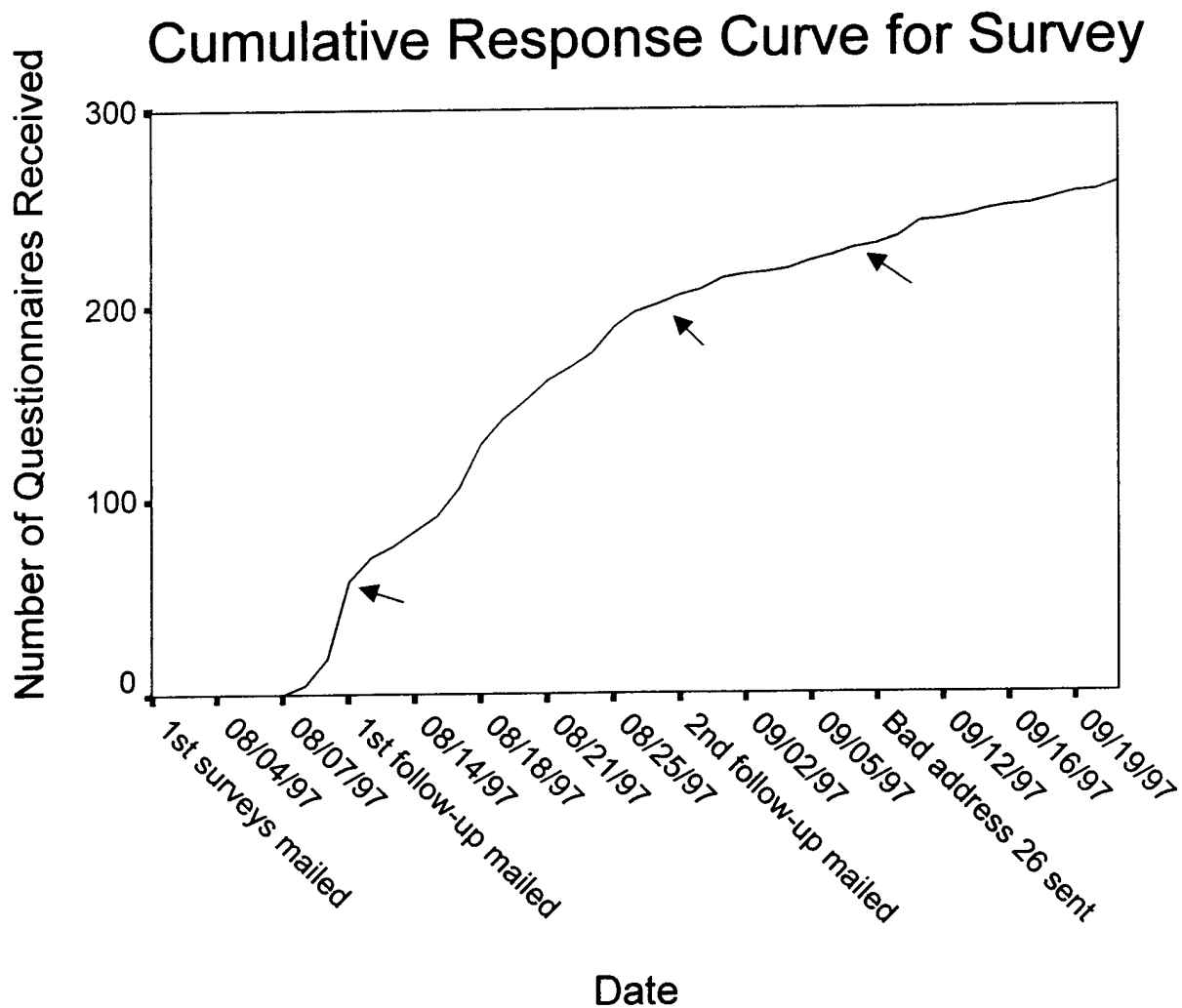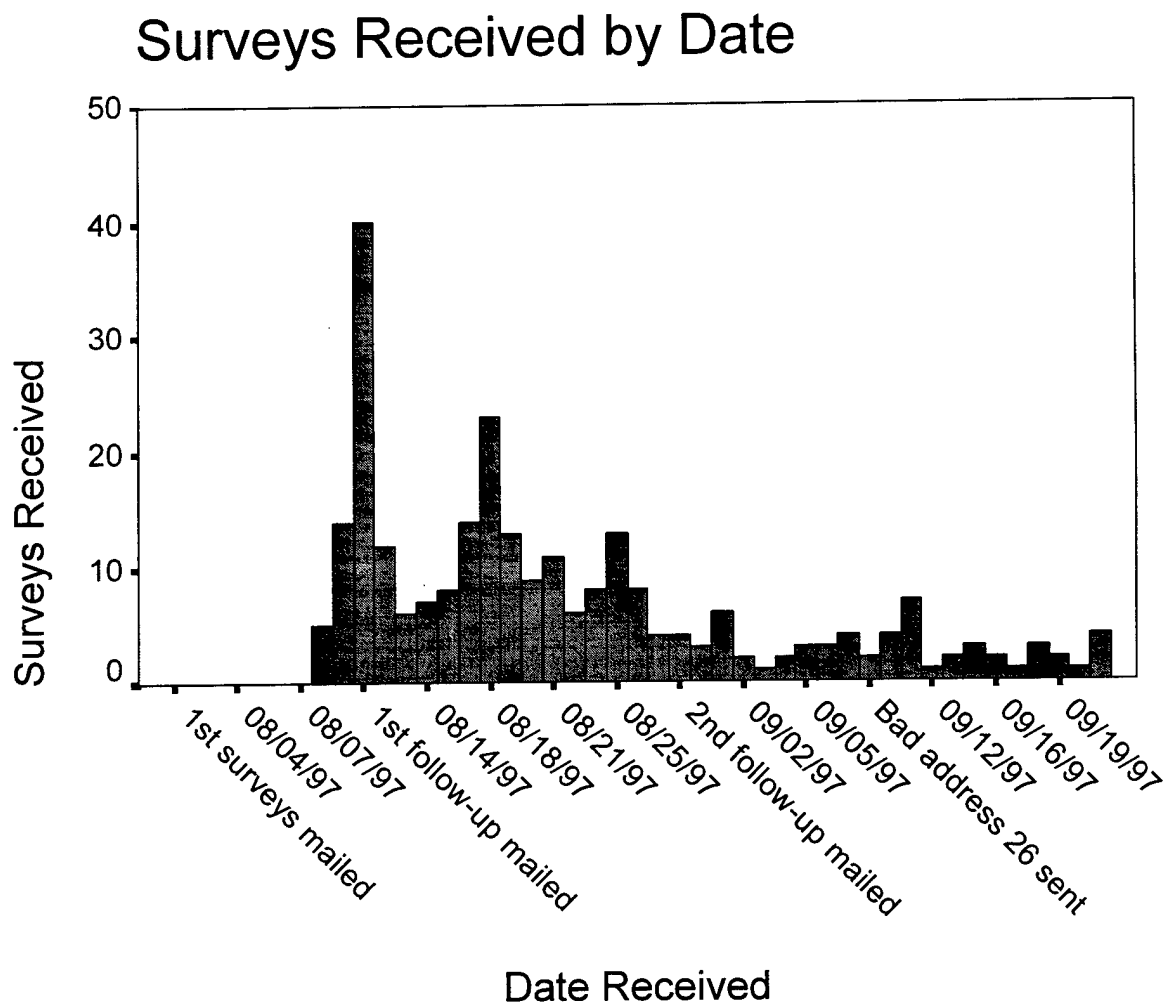
APPENDIX G

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	Q62C2RSY	Respondent shouted at partner
2.	Q64C2RSP	Respondent did something to spite partner
3.	Q66C2RIS	Respondent insulted or swore at partner
4.	Q68C2RSO	Respondent stomped out of room
5.	Q70C2RCF	Respondent called partner fat or ugly
6.	Q72C2RLL	Respondent called partner a lousy lover
7.	Q74C2RDE	Respondent destroyed something of partner
8.	Q76C2RTH	Respondent threatened to hit or throw something

		Mean	Std Dev	Cases
1.	Q62C2RSY	6.9133	7.3081	240.0
2.	Q64C2RSP	1.4217	3.2880	240.0
3.	Q66C2RIS	3.3965	5.5116	240.0
4.	Q68C2RSO	3.0137	4.6073	240.0
5.	Q70C2RCF	.1793	1.4249	240.0
6.	Q72C2RLL	.2084	1.5247	240.0
7.	Q74C2RDE	.0586	.3372	240.0
8.	Q76C2RTH	.3548	1.6374	240.0

	Mean	Variance	Std Dev	N of Variables
Statistics for SCALE	15.5462	345.8067	18.5959	8

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
Q62C2RSY	8.6330	184.4416	.5439	.7266
Q64C2RSP	14.1245	275.6781	.5433	.6920
Q66C2RIS	12.1498	207.7688	.6776	.6467
Q68C2RSO	12.5325	236.4067	.6223	.6645
Q70C2RCF	15.3669	321.2277	.4415	.7274
Q72C2RLL	15.3379	316.4439	.4985	.7219
Q74C2RDE	15.4876	343.0787	.2093	.7489
Q76C2RTH	15.1915	312.7691	.5241	.7180

Reliability Coefficients

N of Cases =   240.0   N of Items = 8

Alpha =   .7364

```
R E L I A B I L I T Y    A N A L Y S I S    -    S C A L E   (A L P H A)
```

1.	Q63C2PSY	Partner shouted at respondent
2.	Q65C2PSP	Partner did something to spite responden
3.	Q67C2PIS	Partner insulted or swore at respondent
4.	Q69C2PSO	Partner stopmped out of room
5.	Q71C2PCF	Partner called respondent fat or ugly
6.	Q73C2PLL	Partner called respondent a lousy lover
7.	Q75C2PDE	Partner destroyed something of repondent
8.	Q77C2PTH	Partner threatened to hit or throw somet

		Mean	Std Dev	Cases
1.	Q63C2PSY	5.6141	6.9217	238.0
2.	Q65C2PSP	1.4293	3.4062	238.0
3.	Q67C2PIS	3.1603	5.5579	238.0
4.	Q69C2PSO	2.5349	4.7732	238.0
5.	Q71C2PCF	.5214	2.5185	238.0
6.	Q73C2PLL	.2353	1.6080	238.0
7.	Q75C2PDE	.0842	.4608	238.0
8.	Q77C2PTH	.3704	1.9502	238.0

	Mean	Variance	Std Dev	N of Variables
Statistics for SCALE	13.9499	389.7673	19.7425	8

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
Q63C2PSY	8.3358	210.2139	.6559	.7326
Q65C2PSP	12.5206	305.7472	.6079	.7297
Q67C2PIS	10.7896	230.5642	.7602	.6847
Q69C2PSO	11.4150	255.5720	.7300	.6949
Q71C2PCF	13.4285	350.1951	.3525	.7676
Q73C2PLL	13.7146	366.7739	.3313	.7737
Q75C2PDE	13.8658	384.6579	.2710	.7848
Q77C2PTH	13.5795	361.0094	.3367	.7713

Reliability Coefficients

N of Cases =   238.0   N of Items = 8

Alpha =   .7730

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	Q78CPRT	Respondent threw something at partner
2.	Q82CPRW	Respondent twisted partner's arm or hair
3.	Q86CPRP	Respondent pushed or shoved partner
4.	Q90CPRG	Respondent grabbed partner
5.	Q94CPRS	Respondent slapped partner
6.	Q98CPRK	Respondent used a knife or gun on partne
7.	Q102CRH	Respondent punched or hit partner with s
8.	Q106CRC	Respondent choked partner
9.	Q110CRL	Respondent slammed partner against a wal
10.	Q114CRB	Respondent burned or scalded partner
11.	Q118CRKI	Respondent kicked partner
12.	Q122CPRB	Respondent beat up partner

		Mean	Std Dev	Cases
1.	Q78CPRT	.0571	.2787	248.0
2.	Q82CPRW	.0081	.1270	248.0
3.	Q86CPRP	.1901	.7256	248.0
4.	Q90CPRG	.0891	.4410	248.0
5.	Q94CPRS	.1499	1.3727	248.0
6.	Q98CPRK	.0000	.0006	248.0
7.	Q102CRH	.0163	.1550	248.0
8.	Q106CRC	.0000	.0006	248.0
9.	Q110CRL	.0000	.0000	248.0
10.	Q114CRB	.0000	.0000	248.0
11.	Q118CRKI	.0202	.1671	248.0
12.	Q122CPRB	.0000	.0000	248.0

* * * Warning * * *   Zero variance items

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	.5309	3.6758	1.9172	12

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q78CPRT	.4738	3.3659	.2270	.2263
Q82CPRW	.5229	3.5710	.1848	.2575
Q86CPRP	.3408	2.4412	.3123	.0976
Q90CPRG	.4419	3.0308	.2934	.1721
Q94CPRS	.3810	1.5571	.0684	.4877
Q98CPRK	.5309	3.6757	.0495	.2767
Q102CRH	.5146	3.6017	.0851	.2671
Q106CRC	.5309	3.6755	.1160	.2767
Q110CRL	.5309	3.6758	.0000	.2767
Q114CRB	.5309	3.6758	.0000	.2767
Q118CRKI	.5107	3.5628	.1348	.2593
Q122CPRB	.5309	3.6758	.0000	.2767

Reliability Coefficients

N of Cases =   248.0   N of Items = 12

Alpha =   .2745

```
R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

    1.      Q79CPPT            Partner threw something at respondent
    2.      Q83CPPW            Partner twisted respondents arm or hair
    3.      Q87CPPP            Partner pushed or shoved respondent
    4.      Q91CPPG            Partner grabbed respondent
    5.      Q95CPPS            Partner slapped respondent
    6.      Q99CPPK            Partner used a knife or gun on responden
    7.      Q103CPH            Partner punched or hit respondent with s
    8.      Q107CPC            Partner choked respondent
    9.      Q111CPL            Partner slammed respondent against a wal
   10.      Q115CPB            Partner burned or scalded respondent
   11.      Q119CPKI           Partner kicked respondent
   12.      Q123CPPB           Partner beat up respondent

                              Mean          Std Dev         Cases

    1.      Q79CPPT           .0765          .4190          249.0
    2.      Q83CPPW           .1929         1.4574          249.0
    3.      Q87CPPP           .3220         1.6779          249.0
    4.      Q91CPPG           .3299         1.8282          249.0
    5.      Q95CPPS           .1650         1.4677          249.0
    6.      Q99CPPK           .0000          .0006          249.0
    7.      Q103CPH           .0564          .5433          249.0
    8.      Q107CPC           .0163          .2535          249.0
    9.      Q111CPL           .0727          .6244          249.0
   10.      Q115CPB           .0000          .0000          249.0
   11.      Q119CPKI          .0843          .6452          249.0
   12.      Q123CPPB          .0000          .0000          249.0

     * * * Warning * * *   Zero variance items

                                                       N of
Statistics for         Mean     Variance    Std Dev  Variables
     SCALE            1.3161     47.6196     6.9007       12
```

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
Q79CPPT	1.2395	44.4948	.5276	.8132
Q83CPPW	1.1231	32.1947	.8043	.7702
Q87CPPP	.9941	29.2328	.8582	.7628
Q91CPPG	.9862	27.9104	.8473	.7676
Q95CPPS	1.1511	40.1422	.2862	.8363
Q99CPPK	1.3160	47.6197	-.0120	.8280
Q103CPH	1.2597	43.3282	.5587	.8085
Q107CPC	1.2998	45.0473	.7371	.8140
Q111CPL	1.2434	40.4723	.8506	.7905
Q115CPB	1.3161	47.6196	.0000	.8280
Q119CPKI	1.2317	42.2908	.5854	.8045
Q123CPPB	1.3161	47.6196	.0000	.8280

Reliability Coefficients

N of Cases =   249.0   N of Items = 12

Alpha =   .8211

```
R E L I A B I L I T Y    A N A L Y S I S   -   S C A L E   (A L P H A)
```

1.	Q92CPRGS	Respondent grabbed partner in self-defen
2.	Q80CPRTS	Respondent threw something in self defen
3.	Q84CPRWS	Respondent twisted partner's arm or hair
4.	Q88CPRPS	Respondent pushed oe shoved partner in s
5.	Q96CPRSS	Respondent slapped partner in self defen
6.	Q100CRKS	Respondent used a knife or gun in self d
7.	Q104CRHS	Respondent punched or hit partner with s
8.	Q108CRCS	Respondent choked partner in self defens
9.	Q112CRLS	Respondent slammed partner against a wal
10.	Q116CRBS	Respondent burned or scalded partner in
11.	Q120CRKS	Respondent kicked partner in self defens

		Mean	Std Dev	Cases
1.	Q92CPRGS	.0121	.1415	249.0
2.	Q80CPRTS	.0120	.1415	249.0
3.	Q84CPRWS	.0000	.0000	249.0
4.	Q88CPRPS	.0363	.3024	249.0
5.	Q96CPRSS	.0121	.1415	249.0
6.	Q100CRKS	.0000	.0000	249.0
7.	Q104CRHS	.0000	.0006	249.0
8.	Q108CRCS	.0000	.0006	249.0
9.	Q112CRLS	.0000	.0000	249.0
10.	Q116CRBS	.0000	.0000	249.0
11.	Q120CRKS	.0041	.0634	249.0

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	.0767	.2242	.4735	11

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q92CPRGS	.0646	.1734	.2611	.2430
Q80CPRTS	.0647	.1493	.5021	.1028
Q84CPRWS	.0767	.2242	.0000	.3405
Q88CPRPS	.0404	.1114	.1057	.4723
Q96CPRSS	.0647	.1734	.2612	.2430
Q100CRKS	.0767	.2242	.0000	.3405
Q104CRHS	.0767	.2242	-.0076	.3405
Q108CRCS	.0767	.2242	-.0103	.3405
Q112CRLS	.0767	.2242	.0000	.3405
Q116CRBS	.0767	.2242	.0000	.3405
Q120CRKS	.0727	.2205	-.0059	.3479

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Reliability Coefficients

N of Cases =   249.0   N of Items = 11

Alpha =   .3371

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

1.	Q81CPPTS	Partner threw something in self defense
2.	Q85CPPWS	Partner twisted respondent's arm or hair
3.	Q89CPPPS	Partner pushed or shoved respondent in s
4.	Q93CPPGS	Partner grabbed respondent in self defen
5.	Q97CPPSS	Partner slapped respondent in self defen
6.	Q101CPKS	Partner used a knife or gun in self defe
7.	Q105CPHS	Partner punched or hit respondent with s
8.	Q109CPCS	Partner choked respondent in self defens
9.	Q113CPLS	Partner slammed respondent against a wal
10.	Q117CPBS	Partner burned or scalded respondent in
11.	Q121CPKS	Partner kicked respondent in self defens

		Mean	Std Dev	Cases
1.	Q81CPPTS	.0040	.0634	249.0
2.	Q85CPPWS	.0040	.0634	249.0
3.	Q89CPPPS	.0202	.1668	249.0
4.	Q93CPPGS	.0161	.1260	249.0
5.	Q97CPPSS	.0040	.0634	249.0
6.	Q101CPKS	.0000	.0006	249.0
7.	Q105CPHS	.0000	.0006	249.0
8.	Q109CPCS	.0000	.0000	249.0
9.	Q113CPLS	.0040	.0634	249.0
10.	Q117CPBS	.0000	.0000	249.0
11.	Q121CPKS	.0000	.0000	249.0

* * * Warning * * *   Zero variance items

Statistics for	Mean	Variance	Std Dev	N of Variables
SCALE	.0525	.0820	.2863	11

R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item- Total Correlation	Alpha if Item Deleted
Q81CPPTS	.0485	.0703	.2283	.2303
Q85CPPWS	.0485	.0703	.2283	.2303
Q89CPPPS	.0323	.0394	.2239	.2096
Q93CPPGS	.0363	.0592	.1137	.2869
Q97CPPSS	.0485	.0784	-.0110	.3209
Q101CPKS	.0524	.0819	.2106	.3007
Q105CPHS	.0524	.0820	-.0117	.3015
Q109CPCS	.0525	.0820	.0000	.3014
Q113CPLS	.0485	.0703	.2283	.2303
Q117CPBS	.0525	.0820	.0000	.3014
Q121CPKS	.0525	.0820	.0000	.3014

Reliability Coefficients

N of Cases =   249.0   N of Items = 11

Alpha =   .2984

```
R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)
```

1.	Q124CMRC	Respondent had sprain, bruise, or small
2.	Q126CMRP	Respondent felt pain the next day
3.	Q128CMRD	Respondent went to doctor for injury
4.	Q130CMRN	Respondent needed to see doctor, but did
5.	Q132CMRB	Respondent had broken bone or passed out

		Mean	Std Dev	Cases
1.	Q124CMRC	.1163	.5511	250.0
2.	Q126CMRP	.0883	.4745	250.0
3.	Q128CMRD	.0000	.0006	250.0
4.	Q130CMRN	.0000	.0006	250.0
5.	Q132CMRB	.0040	.0632	250.0

	Mean	Variance	Std Dev	N of Variables
Statistics for SCALE	.2086	1.0253	1.0126	5

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
Q124CMRC	.0924	.2447	.8747	.0849
Q126CMRP	.1204	.3391	.8344	.1235
Q128CMRD	.2086	1.0248	.3633	.6401
Q130CMRN	.2086	1.0253	-.0125	.6405
Q132CMRB	.2046	.9748	.3727	.6100

Reliability Coefficients

N of Cases =   250.0   N of Items = 5

Alpha =   .6004

```
R E L I A B I L I T Y   A N A L Y S I S   -   S C A L E   (A L P H A)
```

1.	Q125CMPC	Partner had sprain, bruise, or small cut
2.	Q127CMPP	Partner felt pain the next day
3.	Q129CMPD	Partner went to doctor for injury
4.	Q131CMPN	Partner needed to see doctor, but didn't
5.	Q133CMPB	Partner had broken bone or passed out

		Mean	Std Dev	Cases
1.	Q125CMPC	.0282	.2438	250.0
2.	Q127CMPP	.0041	.0632	250.0
3.	Q129CMPD	.0000	.0006	250.0
4.	Q131CMPN	.0000	.0000	250.0
5.	Q133CMPB	.0040	.0632	250.0

	Mean	Variance	Std Dev	N of Variables
Statistics for SCALE	.0363	.0750	.2738	5

Item-total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Alpha if Item Deleted
Q125CMPC	.0081	.0080	.1740	-.0055
Q127CMPP	.0322	.0632	.2443	-.0048
Q129CMPD	.0363	.0750	-.0038	.1341
Q131CMPN	.0363	.0750	.0000	.1341
Q133CMPB	.0323	.0712	-.0077	.1460

Reliability Coefficients

N of Cases =   250.0   N of Items = 5

Alpha =   .1257

APPENDIX H

USE AGREEMENT

THIS AGREEMENT COVERS (circle): (CTS2) CTSPC Both

PROJECT TITLE/PURPOSE OF ADMINISTERING THE TESTS:
Title: Spouse Abuse Reporting and Intervention Effectiveness in the Air Force

Purpose: This study looks at spouse abuse reporting behaviors of Air Force spouses, the strength of incentives and disincentives to victim reporting, and the probable effects of different types of interventions. Also, the study looks at the recidivism rate in reported and non-reported offenders. Then, all of this information will be put back into an overall equation to predict the effects of certain interventions on the total number of repeat spouse abuse. The identification of abuse is to be done using a modified form of the CTS2.

ESTIMATED NUMBER OF PERSONS TO BE TESTED - **about 450 (based on expected response rate**

WOMEN: **375** MEN: **75** COUPLES: (both tested) CHILDREN:

MONTH AND YEAR TESTING WILL BEGIN: **July 97** AND END: **Sep 97**

DO YOU PLAN TO CARRY OUT AND PUBLISH PSYCHOMETRIC ANALYSES OF THE DATA?

If YES. please attach a paragraph describing your plan

If NO. please indicate the form in which you plan to provide data
to us for purposes of our conducting psychometric analyses

Test answer sheets or test booklets (these will be returned to the Cooperating User by the Authors)
File of data on disk in one of the following formats (circle one)
ASCII. Word Perfect. Word. SPSS. SAS. STATA.

Name of Cooperating User: **Elliot Heath Graves**
Address:
2112 New Berne Rd
Richmond, VA 23228

PHONE/FAX: **(804) 553-3916**
E-Mail   **s2ehgrav@atlas.vcu.edu**
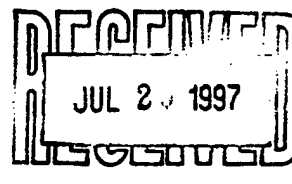
Cooperating
User Signature _____ DATE **6/12/97**

IF YOU ARE A STUDENT: Please have the faculty advisor for this research sign this form:

_____
Faculty Advisor Signature   DATE **6/12/96**

Advisor Name. Title. and Institution:
Dr. Laura J. Moriarty
Associate Professor, Department of Criminal Justice
Virginia Commonwealth University

For the Test Authors*: _____ DATE **3/ July 97**

* The Test Authors of the CTS2 are Murray A. Straus. Sherry L. Hamby. Sue Boney-McCoy. and David B. Sugarman. The Test Authors of the PCCTS are Murray A. Straus. Sherry L. Hamby. Desmond Runyan. and David Finkelhor.

APPENDIX I

Logistic Regression Model for Violence this year
(Deviation coded-each variable relative to average)

Dependent Variable..   VITHYR01
Beginning Block Number   0.   Initial Log Likelihood Function

-2 Log Likelihood   193.82207

* Constant is included in the model.

Beginning Block Number   1.   Method: Enter

Variable(s) Entered on Step Number
1..   ACPTSLAP
           Q47PAGE#
           Q198HOIN
           Q211HIN$
           Q216PDRU

Estimation terminated at iteration number 9 because
Log Likelihood decreased by less than .01 percent.

-2 Log Likelihood	111.490
Goodness of Fit	144.099
Cox & Snell - R^2	.309
Nagelkerke - R^2	.532

	Chi-Square	df	Significance
Model	82.332	39	.0001
Block	82.332	39	.0001
Step	82.332	39	.0001

---------- Hosmer and Lemeshow Goodness-of-Fit Test----------

	VITHYR01 = 0		VITHYR01 = 1		
Group	Observed	Expected	Observed	Expected	Total
1	22.000	22.000	.000	.000	22.000
2	22.000	21.994	.000	.006	22.000
3	22.000	21.858	.000	.142	22.000
4	22.000	21.636	.000	.364	22.000
5	22.000	21.275	.000	.725	22.000
6	18.000	20.681	4.000	1.319	22.000
7	20.000	20.624	3.000	2.376	23.000
8	18.000	17.768	4.000	4.232	22.000
9	17.000	13.987	5.000	8.013	22.000
10	5.000	6.174	19.000	17.826	24.000

	Chi-Square	df	Significance
Goodness-of-fit test	9.3486	8	.3138

```
Classification Table for VITHYR01
The Cut Value is .50
                    Predicted
                    0        1      Percent Correct
                     0   I    1
Observed        +-------+-------+
   0      0     I  183  I    5  I    97.34%
                +-------+-------+
   1      1     I   15  I   20  I    57.14%
                +-------+-------+
                         Overall   91.03%
```

```
-------------------- Variables in the Equation --------------------

Variable              B        S.E.      Wald     df     Sig       R

ACPTSLAP                                 23.0837   4    .0001    .2790
 ACPTSLAP(1)       -.5539    17.1296     .0010     1    .9742    .0000
 ACPTSLAP(2)       2.6955    17.1377     .0247     1    .8750    .0000
 ACPTSLAP(3)       2.4297    17.1338     .0201     1    .8872    .0000
 ACPTSLAP(4)      -6.8043    68.4914     .0099     1    .9209    .0000
Q47PAGE#                                 14.6020  14    .4059    .0000
 Q47PAGE#(1)      12.8913   154.6532     .0069     1    .9336    .0000
 Q47PAGE#(2)       5.3066    23.1098     .0527     1    .8184    .0000
 Q47PAGE#(3)      -3.4805   154.6529     .0005     1    .9820    .0000
 Q47PAGE#(4)       2.4075    23.0606     .0109     1    .9169    .0000
 Q47PAGE#(5)       3.5684    23.0572     .0240     1    .8770    .0000
 Q47PAGE#(6)      -6.5082   109.7363     .0035     1    .9527    .0000
 Q47PAGE#(7)       2.9600    23.0519     .0165     1    .8978    .0000
 Q47PAGE#(8)        .5999    23.0630     .0007     1    .9792    .0000
 Q47PAGE#(9)       1.5218    23.0508     .0044     1    .9474    .0000
 Q47PAGE#(10)       .4548    23.0598     .0004     1    .9843    .0000
 Q47PAGE#(11)     -6.0957   100.4141     .0037     1    .9516    .0000
 Q47PAGE#(12)     -6.9880    38.3990     .0331     1    .8556    .0000
 Q47PAGE#(13)     -4.9312   109.1667     .0020     1    .9640    .0000
 Q47PAGE#(14)      1.9142    23.0815     .0069     1    .9339    .0000
Q198HOIN                                  9.1653   5    .1026    .0000
 Q198HOIN(1)       1.1117      .6707    2.7472     1    .0974    .0621
 Q198HOIN(2)        .9046      .5522    2.6837     1    .1014    .0594
 Q198HOIN(3)        .1851      .6468     .0819     1    .7748    .0000
 Q198HOIN(4)       -.4698      .5953     .6229     1    .4300    .0000
 Q198HOIN(5)       -.2506     1.0253     .0597     1    .8069    .0000
Q211HIN$                                 10.0956  10    .4321    .0000
 Q211HIN$(1)      -9.9958    70.4470     .0201     1    .8872    .0000
 Q211HIN$(2)       -.3174     9.6319     .0011     1    .9737    .0000
 Q211HIN$(3)       3.6202     9.5562     .1435     1    .7048    .0000
 Q211HIN$(4)       1.5607     9.5469     .0267     1    .8701    .0000
 Q211HIN$(5)       2.8234     9.5414     .0876     1    .7673    .0000
 Q211HIN$(6)       1.7883     9.5435     .0351     1    .8514    .0000
 Q211HIN$(7)       2.3898     9.5407     .0627     1    .8022    .0000
 Q211HIN$(8)       1.7798     9.5473     .0348     1    .8521    .0000
 Q211HIN$(9)       -.1771     9.5863     .0003     1    .9853    .0000
 Q211HIN$(10)      2.9493     9.6132     .0941     1    .7590    .0000
Q216PDRU                                  2.7896   6    .8347    .0000
 Q216PDRU(1)       2.6499    16.6237     .0254     1    .8733    .0000
 Q216PDRU(2)       3.4970    16.6262     .0442     1    .8334    .0000
 Q216PDRU(3)     -10.8240    38.5259     .0789     1    .7787    .0000
 Q216PDRU(4)       2.2188    16.6564     .0177     1    .8940    .0000
 Q216PDRU(5)       2.4610    16.6842     .0218     1    .8827    .0000
 Q216PDRU(6)      -3.5094    93.4443     .0014     1    .9700    .0000
Constant          -8.8782    34.5108     .0662     1    .7970
```

		95% CI for Exp(B)	
Variable	Exp(B)	Lower	Upper
ACPTSLAP(1)	.5747	.0000	2.189E+14
ACPTSLAP(2)	14.8131	.0000	5.732E+15
ACPTSLAP(3)	11.3556	.0000	4.360E+15
ACPTSLAP(4)	.0011	.0000	2.213E+55
Q47PAGE#(1)	396856.12	.0000	1.737+137
Q47PAGE#(2)	201.6677	.0000	9.456E+21
Q47PAGE#(3)	.0308	.0000	1.347+130
Q47PAGE#(4)	11.1064	.0000	4.729E+20
Q47PAGE#(5)	35.4593	.0000	1.500E+21
Q47PAGE#(6)	.0015	.0000	3.812E+90
Q47PAGE#(7)	19.2972	.0000	8.078E+20
Q47PAGE#(8)	1.8220	.0000	7.794E+19
Q47PAGE#(9)	4.5805	.0000	1.913E+20
Q47PAGE#(10)	1.5759	.0000	6.700E+19
Q47PAGE#(11)	.0023	.0000	6.688E+82
Q47PAGE#(12)	.0009	.0000	4.471E+29
Q47PAGE#(13)	.0072	.0000	6.044E+90
Q47PAGE#(14)	6.7814	.0000	3.008E+20
Q198HOIN(1)	3.0396	.8164	11.3177
Q198HOIN(2)	2.4710	.8372	7.2928
Q198HOIN(3)	1.2033	.3387	4.2752
Q198HOIN(4)	.6251	.1946	2.0077
Q198HOIN(5)	.7784	.1043	5.8067
Q211HIN$(1)	.0000	.0000	4.202E+55
Q211HIN$(2)	.7280	.0000	115042601
Q211HIN$(3)	37.3459	.0000	5.087E+09
Q211HIN$(4)	4.7621	.0000	637024050
Q211HIN$(5)	16.8342	.0000	2.228E+09
Q211HIN$(6)	5.9795	.0000	794492098
Q211HIN$(7)	10.9115	.0000	1.442E+09
Q211HIN$(8)	5.9286	.0000	793641906
Q211HIN$(9)	.8377	.0000	121057288
Q211HIN$(10)	19.0923	.0000	2.908E+09
Q216PDRU(1)	14.1530	.0000	2.000E+15
Q216PDRU(2)	33.0178	.0000	4.688E+15
Q216PDRU(3)	.0000	.0000	1.237E+28
Q216PDRU(4)	9.1961	.0000	1.385E+15
Q216PDRU(5)	11.7167	.0000	1.864E+15
Q216PDRU(6)	.0299	.0000	1.037E+78

```
                Observed Groups and Predicted Probabilities

         80 +                                                            +
            I0                                                           I
            I0                                                           I
   F        I0                                                           I
   R    60 +0                                                            +
   E        I0                                                           I
   Q        I0                                                           I
   U        I0                                                           I
   E    40 +0                                                            +
   N        I0                                                           I
   C        I0                                                           I
   Y        I00                                                          I
        20 +00                                                           +
            I000                                                         I
            I00000                                                       I
            I0000000 00    0 0    00      1                    1         I
Predicted  --------------+--------------+--------------+---------------
   Prob:    0           .25            .5            .75             1
   Group:   000000000000000000000000000000011111111111111111111111111111

            Predicted Probability is of Membership for 1
            The Cut Value is .50
            Symbols: 0 - 0
                     1 - 1
            Each Symbol Represents 5 Cases.
```

1 new variables have been created.
   Name   Contents

   PRE_3   Predicted Value

```
Total number of cases:       261 (Unweighted)
Number of selected cases:    261
Number of unselected cases:  0

Number of selected cases:                         261
Number rejected because of missing data:          38
Number of cases included in the analysis:         223
```

Dependent Variable Encoding:

```
Original        Internal
Value           Value
        0           0
        1           1
```

	Value	Freq	Parameter Coding						
			(1)	(2)	(3)	(4)	(5)	(6)	(7)
Q47PAGE#									
	20	1	1.000	.000	.000	.000	.000	.000	.000
	22	5	.000	1.000	.000	.000	.000	.000	.000
	22	1	.000	.000	1.000	.000	.000	.000	.000
	24	13	.000	.000	.000	1.000	.000	.000	.000
	26	16	.000	.000	.000	.000	1.000	.000	.000
	26	2	.000	.000	.000	.000	.000	1.000	.000
	28	24	.000	.000	.000	.000	.000	.000	1.000
	31	30	.000	.000	.000	.000	.000	.000	.000
	35	55	.000	.000	.000	.000	.000	.000	.000
	39	44	.000	.000	.000	.000	.000	.000	.000
	39	2	.000	.000	.000	.000	.000	.000	.000
	43	18	.000	.000	.000	.000	.000	.000	.000
	43	2	.000	.000	.000	.000	.000	.000	.000
	47	9	.000	.000	.000	.000	.000	.000	.000
	51	1	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000

	Value	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Q47PAGE#								
	20	.000	.000	.000	.000	.000	.000	.000
	22	.000	.000	.000	.000	.000	.000	.000
	22	.000	.000	.000	.000	.000	.000	.000
	24	.000	.000	.000	.000	.000	.000	.000
	26	.000	.000	.000	.000	.000	.000	.000
	26	.000	.000	.000	.000	.000	.000	.000
	28	.000	.000	.000	.000	.000	.000	.000
	31	1.000	.000	.000	.000	.000	.000	.000
	35	.000	1.000	.000	.000	.000	.000	.000
	39	.000	.000	1.000	.000	.000	.000	.000
	39	.000	.000	.000	1.000	.000	.000	.000
	43	.000	.000	.000	.000	1.000	.000	.000
	43	.000	.000	.000	.000	.000	1.000	.000
	47	.000	.000	.000	.000	.000	.000	1.000
	51	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000

		Parameter Coding						
Value	Freq	(1)	(2)	(3)	(4)	(5)	(6)	(7)

Q211HIN$

Value	Freq	(1)	(2)	(3)	(4)	(5)	(6)	(7)
6000	3	1.000	.000	.000	.000	.000	.000	.000
14500	7	.000	1.000	.000	.000	.000	.000	.000
19500	16	.000	.000	1.000	.000	.000	.000	.000
24500	32	.000	.000	.000	1.000	.000	.000	.000
30500	27	.000	.000	.000	.000	1.000	.000	.000
37500	29	.000	.000	.000	.000	.000	1.000	.000
45500	39	.000	.000	.000	.000	.000	.000	1.000
60000	37	.000	.000	.000	.000	.000	.000	.000
80000	19	.000	.000	.000	.000	.000	.000	.000
105000	11	.000	.000	.000	.000	.000	.000	.000
121000	3	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000

	(8)	(9)	(10)

Q211HIN$

Value	(8)	(9)	(10)
6000	.000	.000	.000
14500	.000	.000	.000
19500	.000	.000	.000
24500	.000	.000	.000
30500	.000	.000	.000
37500	.000	.000	.000
45500	.000	.000	.000
60000	1.000	.000	.000
80000	.000	1.000	.000
105000	.000	.000	1.000
121000	-1.000	-1.000	-1.000

	Value	Freq	Parameter Coding					
			(1)	(2)	(3)	(4)	(5)	(6)
Q216PDRU								
	0	130	1.000	.000	.000	.000	.000	.000
	1	68	.000	1.000	.000	.000	.000	.000
	2	8	.000	.000	1.000	.000	.000	.000
	3	8	.000	.000	.000	1.000	.000	.000
	4	3	.000	.000	.000	.000	1.000	.000
	5	2	.000	.000	.000	.000	.000	1.000
	6	4	-1.000	-1.000	-1.000	-1.000	-1.000	-1.000
Q198HOIN								
	0	25	1.000	.000	.000	.000	.000	
	1	37	.000	1.000	.000	.000	.000	
	2	34	.000	.000	1.000	.000	.000	
	3	64	.000	.000	.000	1.000	.000	
	4	17	.000	.000	.000	.000	1.000	
	5	46	-1.000	-1.000	-1.000	-1.000	-1.000	
ACPTSLAP								
	.0	168	1.000	.000	.000	.000		
	.5	12	.000	1.000	.000	.000		
	1.0	26	.000	.000	1.000	.000		
	1.5	3	.000	.000	.000	1.000		
	2.0	14	-1.000	-1.000	-1.000	-1.000		

Logistic Regression Model for Violence this year
(Indicator coded-each relative to first category)

Dependent Variable..   VITHYR01
Beginning Block Number   0.   Initial Log Likelihood Function

-2 Log Likelihood   193.82207

* Constant is included in the model.

Beginning Block Number   1.   Method: Enter

Variable(s) Entered on Step Number
1..   ACPTSLAP
           Q47PAGE#
           Q198HOIN
           Q211HIN$
           Q216PDRU

Estimation terminated at iteration number 9 because
Log Likelihood decreased by less than .01 percent.

    -2 Log Likelihood   111.490
    Goodness of Fit   144.099
    Cox & Snell - R^2   .309
    Nagelkerke - R^2   .532

                    Chi-Square   df Significance

    Model   82.332   39   .0001
    Block   82.332   39   .0001
    Step   82.332   39   .0001

---------- Hosmer and Lemeshow Goodness-of-Fit Test-----------

       VITHYR01 = 0   VITHYR01 = 1

  Group   Observed   Expected   Observed   Expected   Total

      1   22.000   22.000   .000   .000   22.000
      2   22.000   21.994   .000   .006   22.000
      3   22.000   21.858   .000   .142   22.000
      4   22.000   21.636   .000   .364   22.000
      5   22.000   21.275   .000   .725   22.000
      6   18.000   20.681   4.000   1.319   22.000
      7   20.000   20.624   3.000   2.376   23.000
      8   18.000   17.768   4.000   4.232   22.000
      9   17.000   13.987   5.000   8.013   22.000
     10   5.000   6.174   19.000   17.826   24.000

                    Chi-Square   df Significance

Goodness-of-fit test   9.3486   8   .3138

```
Classification Table for VITHYR01
The Cut Value is .50
                   Predicted
                   0         1      Percent Correct
                     0   I   1
Observed        +-------+-------+
   0      0    I  183  I    5  I    97.34%
                +-------+-------+
   1      1    I   15  I   20  I    57.14%
                +-------+-------+
                         Overall   91.03%
```

```
------------------- Variables in the Equation -------------------

Variable              B         S.E.      Wald      df      Sig        R

ACPTSLAP                                  23.0837    4     .0001     .2790
  ACPTSLAP(1)      3.2494      .9753      11.0993    1     .0009     .2167
  ACPTSLAP(2)      2.9836      .7726      14.9148    1     .0001     .2581
  ACPTSLAP(3)     -6.2504    85.6152       .0053     1     .9418     .0000
  ACPTSLAP(4)      2.7870     1.1175       6.2201    1     .0126     .1476
Q47PAGE#                                  14.6020   14     .4059     .0000
  Q47PAGE#(1)     -7.5847   164.2736       .0021     1     .9632     .0000
  Q47PAGE#(2)    -16.3718   232.3144       .0050     1     .9438     .0000
  Q47PAGE#(3)    -10.4838   164.2718       .0041     1     .9491     .0000
  Q47PAGE#(4)     -9.3229   164.2713       .0032     1     .9547     .0000
  Q47PAGE#(5)    -19.3996   200.6655       .0093     1     .9230     .0000
  Q47PAGE#(6)     -9.9314   164.2706       .0037     1     .9518     .0000
  Q47PAGE#(7)    -12.2914   164.2727       .0056     1     .9404     .0000
  Q47PAGE#(8)    -11.3695   164.2697       .0048     1     .9448     .0000
  Q47PAGE#(9)    -12.4365   164.2712       .0057     1     .9397     .0000
  Q47PAGE#(10)   -18.9870   194.9490       .0095     1     .9224     .0000
  Q47PAGE#(11)   -19.8793   167.5505       .0141     1     .9056     .0000
  Q47PAGE#(12)   -17.8225   200.3081       .0079     1     .9291     .0000
  Q47PAGE#(13)   -10.9771   164.2764       .0045     1     .9467     .0000
  Q47PAGE#(14)   -16.5122   232.3121       .0051     1     .9433     .0000
Q198HOIN                                   9.1653    5     .1026     .0000
  Q198HOIN(1)      -.2071      .8920       .0539     1     .8164     .0000
  Q198HOIN(2)      -.9267      .9797       .8946     1     .3442     .0000
  Q198HOIN(3)     -1.5816      .9549      2.7434     1     .0977    -.0619
  Q198HOIN(4)     -1.3623     1.4149       .9270     1     .3356     .0000
  Q198HOIN(5)     -2.5928     1.0092      6.6007     1     .0102    -.1541
Q211HIN$                                  10.0956   10     .4321     .0000
  Q211HIN$(1)      9.6783    77.1834       .0157     1     .9002     .0000
  Q211HIN$(2)     13.6160    77.1751       .0311     1     .8600     .0000
  Q211HIN$(3)     11.5564    77.1689       .0224     1     .8810     .0000
  Q211HIN$(4)     12.8192    77.1729       .0276     1     .8681     .0000
  Q211HIN$(5)     11.7841    77.1717       .0233     1     .8786     .0000
  Q211HIN$(6)     12.3856    77.1730       .0258     1     .8725     .0000
  Q211HIN$(7)     11.7755    77.1745       .0233     1     .8787     .0000
  Q211HIN$(8)      9.8187    77.1764       .0162     1     .8988     .0000
  Q211HIN$(9)     12.9450    77.1849       .0281     1     .8668     .0000
  Q211HIN$(10)     3.5744   104.6819       .0012     1     .9728     .0000
Q216PDRU                                   2.7896    6     .8347     .0000
  Q216PDRU(1)       .8471      .5832      2.1096     1     .1464     .0238
  Q216PDRU(2)    -13.4739    41.1290       .1073     1     .7432     .0000
  Q216PDRU(3)      -.4311     1.3992       .0950     1     .7580     .0000
  Q216PDRU(4)      -.1889     1.7032       .0123     1     .9117     .0000
  Q216PDRU(5)     -6.1593   108.8020       .0032     1     .9549     .0000
  Q216PDRU(6)       .8567     1.5499       .3055     1     .5804     .0000
Constant          -2.7749   181.4882       .0002     1     .9878
```

		95% CI for Exp(B)	
Variable	Exp(B)	Lower	Upper
ACPTSLAP(1)	25.7756	3.8106	174.3512
ACPTSLAP(2)	19.7594	4.3467	89.8225
ACPTSLAP(3)	.0019	.0000	1.450E+70
ACPTSLAP(4)	16.2316	1.8163	145.0587
Q47PAGE#(1)	.0005	.0000	3.435+136
Q47PAGE#(2)	.0000	.0000	4.327+190
Q47PAGE#(3)	.0000	.0000	1.885+135
Q47PAGE#(4)	.0001	.0000	6.013+135
Q47PAGE#(5)	.0000	.0000	2.408+162
Q47PAGE#(6)	.0000	.0000	3.268+135
Q47PAGE#(7)	.0000	.0000	3.098+134
Q47PAGE#(8)	.0000	.0000	7.744+134
Q47PAGE#(9)	.0000	.0000	2.672+134
Q47PAGE#(10)	.0000	.0000	4.953+157
Q47PAGE#(11)	.0000	.0000	9.677+133
Q47PAGE#(12)	.0000	.0000	5.785+162
Q47PAGE#(13)	.0000	.0000	1.162+135
Q47PAGE#(14)	.0000	.0000	3.743+190
Q198HOIN(1)	.8129	.1415	4.6700
Q198HOIN(2)	.3959	.0580	2.7010
Q198HOIN(3)	.2056	.0316	1.3363
Q198HOIN(4)	.2561	.0160	4.0996
Q198HOIN(5)	.0748	.0104	.5407
Q211HIN$(1)	15967.752	.0000	7.978E+69
Q211HIN$(2)	819110.05	.0000	4.026E+71
Q211HIN$(3)	104446.82	.0000	5.072E+70
Q211HIN$(4)	369225.81	.0000	1.807E+71
Q211HIN$(5)	131148.92	.0000	6.403E+70
Q211HIN$(6)	239322.04	.0000	1.171E+71
Q211HIN$(7)	130032.99	.0000	6.385E+70
Q211HIN$(8)	18373.925	.0000	9.054E+69
Q211HIN$(9)	418752.12	.0000	2.098E+71
Q211HIN$(10)	35.6745	.0000	4.547E+90
Q216PDRU(1)	2.3329	.7438	7.3172
Q216PDRU(2)	.0000	.0000	1.437E+29
Q216PDRU(3)	.6498	.0419	10.0864
Q216PDRU(4)	.8279	.0294	23.3195
Q216PDRU(5)	.0021	.0000	8.660E+89
Q216PDRU(6)	2.3553	.1129	49.1230

```
              Observed Groups and Predicted Probabilities

        80 +                                                              +
           I0                                                             I
           I0                                                             I
  F        I0                                                             I
  R     60 +0                                                             +
  E        I0                                                             I
  Q        I0                                                             I
  U        I0                                                             I
  E     40 +0                                                             +
  N        I0                                                             I
  C        I0                                                             I
  Y        I00                                                            I
        20 +00                                                            +
           I000                                             .            I
           I00000                                                        I
           I0000000 00     0 0    00      1                  1           I
Predicted --------------+--------------+--------------+---------------
   Prob:   0           .25            .5            .75             1
   Group:  00000000000000000000000000000001111111111111111111111111111111

           Predicted Probability is of Membership for 1
           The Cut Value is .50
           Symbols: 0 - 0
                    1 - 1
           Each Symbol Represents 5 Cases.

1 new variables have been created.
   Name           Contents

   PRE_2          Predicted Value
```

```
Total number of cases:       261 (Unweighted)
Number of selected cases:    261
Number of unselected cases:  0

Number of selected cases:                        261
Number rejected because of missing data:         38
Number of cases included in the analysis:        223
```

Dependent Variable Encoding:

```
Original       Internal
Value          Value
       0       0
       1       1
```

	Value	Freq	Parameter Coding						
			(1)	(2)	(3)	(4)	(5)	(6)	(7)
Q47PAGE#									
	20	1	.000	.000	.000	.000	.000	.000	.000
	22	5	1.000	.000	.000	.000	.000	.000	.000
	22	1	.000	1.000	.000	.000	.000	.000	.000
	24	13	.000	.000	1.000	.000	.000	.000	.000
	26	16	.000	.000	.000	1.000	.000	.000	.000
	26	2	.000	.000	.000	.000	1.000	.000	.000
	28	24	.000	.000	.000	.000	.000	1.000	.000
	31	30	.000	.000	.000	.000	.000	.000	1.000
	35	55	.000	.000	.000	.000	.000	.000	.000
	39	44	.000	.000	.000	.000	.000	.000	.000
	39	2	.000	.000	.000	.000	.000	.000	.000
	43	18	.000	.000	.000	.000	.000	.000	.000
	43	2	.000	.000	.000	.000	.000	.000	.000
	47	9	.000	.000	.000	.000	.000	.000	.000
	51	1	.000	.000	.000	.000	.000	.000	.000

	Value	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Q47PAGE#								
	20	.000	.000	.000	.000	.000	.000	.000
	22	.000	.000	.000	.000	.000	.000	.000
	22	.000	.000	.000	.000	.000	.000	.000
	24	.000	.000	.000	.000	.000	.000	.000
	26	.000	.000	.000	.000	.000	.000	.000
	26	.000	.000	.000	.000	.000	.000	.000
	28	.000	.000	.000	.000	.000	.000	.000
	31	.000	.000	.000	.000	.000	.000	.000
	35	1.000	.000	.000	.000	.000	.000	.000
	39	.000	1.000	.000	.000	.000	.000	.000
	39	.000	.000	1.000	.000	.000	.000	.000
	43	.000	.000	.000	1.000	.000	.000	.000
	43	.000	.000	.000	.000	1.000	.000	.000
	47	.000	.000	.000	.000	.000	1.000	.000
	51	.000	.000	.000	.000	.000	.000	1.000

	Value	Freq	Parameter Coding (1)	(2)	(3)	(4)	(5)	(6)	(7)
Q211HIN$									
	6000	3	.000	.000	.000	.000	.000	.000	.000
	14500	7	1.000	.000	.000	.000	.000	.000	.000
	19500	16	.000	1.000	.000	.000	.000	.000	.000
	24500	32	.000	.000	1.000	.000	.000	.000	.000
	30500	27	.000	.000	.000	1.000	.000	.000	.000
	37500	29	.000	.000	.000	.000	1.000	.000	.000
	45500	39	.000	.000	.000	.000	.000	1.000	.000
	60000	37	.000	.000	.000	.000	.000	.000	1.000
	80000	19	.000	.000	.000	.000	.000	.000	.000
	105000	11	.000	.000	.000	.000	.000	.000	.000
	121000	3	.000	.000	.000	.000	.000	.000	.000

		(8)	(9)	(10)
Q211HIN$				
	6000	.000	.000	.000
	14500	.000	.000	.000
	19500	.000	.000	.000
	24500	.000	.000	.000
	30500	.000	.000	.000
	37500	.000	.000	.000
	45500	.000	.000	.000
	60000	.000	.000	.000
	80000	1.000	.000	.000
	105000	.000	1.000	.000
	121000	.000	.000	1.000

	Value	Freq	Parameter Coding					
			(1)	(2)	(3)	(4)	(5)	(6)
Q216PDRU								
	0	130	.000	.000	.000	.000	.000	.000
	1	68	1.000	.000	.000	.000	.000	.000
	2	8	.000	1.000	.000	.000	.000	.000
	3	8	.000	.000	1.000	.000	.000	.000
	4	3	.000	.000	.000	1.000	.000	.000
	5	2	.000	.000	.000	.000	1.000	.000
	6	4	.000	.000	.000	.000	.000	1.000
Q198HOIN								
	0	25	.000	.000	.000	.000	.000	
	1	37	1.000	.000	.000	.000	.000	
	2	34	.000	1.000	.000	.000	.000	
	3	64	.000	.000	1.000	.000	.000	
	4	17	.000	.000	.000	1.000	.000	
	5	46	.000	.000	.000	.000	1.000	
ACPTSLAP								
	.0	168	.000	.000	.000	.000		
	.5	12	1.000	.000	.000	.000		
	1.0	26	.000	1.000	.000	.000		
	1.5	3	.000	.000	1.000	.000		
	2.0	14	.000	.000	.000	1.000		

Regression Model for Serious Abuse this year
(Indicator coded-each category relative to first one)

Dependent Variable.. VCSRSDY0

Beginning Block Number 0. Initial Log Likelihood Function

-2 Log Likelihood   70.418417

* Constant is included in the model.

Beginning Block Number 1. Method: Enter

Variable(s) Entered on Step Number
1..   Q216PDRU
          Q47PAGE#
          PRYRSD5

Estimation terminated at iteration number 12 because
Log Likelihood decreased by less than .01 percent.

    -2 Log Likelihood   22.095
    Goodness of Fit   74.405
    Cox & Snell - R^2   .180
    Nagelkerke - R^2   .717

	Chi-Square	df	Significance
Model	48.324	23	.0015
Block	48.324	23	.0015
Step	48.324	23	.0015

---------- Hosmer and Lemeshow Goodness-of-Fit Test-----------

	VCSRSDY0 = 0		VCSRSDY0 = 1		
Group	Observed	Expected	Observed	Expected	Total
1	22.000	22.000	.000	.000	22.000
2	29.000	29.000	.000	.000	29.000
3	33.000	33.000	.000	.000	33.000
4	19.000	19.000	.000	.000	19.000
5	26.000	26.000	.000	.000	26.000
6	25.000	25.000	.000	.000	25.000
7	31.000	30.990	.000	.010	31.000
8	28.000	27.897	.000	.103	28.000
9	23.000	23.113	8.000	7.887	31.000

	Chi-Square	df	Significance
Goodness-of-fit test	.1160	7	1.000

```
Classification Table for VCSRSDY0
The Cut Value is .50
                    Predicted
                    0       1      Percent Correct
                    0   I   1
Observed      +-------+-------+
   0     0    I  236  I   0  I   100.00%
              +-------+-------+
   1     1    I   3   I   5  I    62.50%
              +-------+-------+
                       Overall  98.77%
```

```
------------------ Variables in the Equation --------------------

Variable              B        S.E.      Wald     df     Sig       R

Q216PDRU                                3.8374     6    .6987    .0000
 Q216PDRU(1)       2.4278     1.5798    2.3617     1    .1243    .0717
 Q216PDRU(2)      -6.7176   204.2691     .0011     1    .9738    .0000
 Q216PDRU(3)       2.8828     8.8137     .1070     1    .7436    .0000
 Q216PDRU(4)     -12.3782   346.8583     .0013     1    .9715    .0000
 Q216PDRU(5)      15.7786    89.2360     .0313     1    .8597    .0000
 Q216PDRU(6)       4.6700     2.5281    3.4123     1    .0647    .1416
Q47PAGE#                                3.6677    14    .9972    .0000
 Q47PAGE#(1)      15.2052   736.1641     .0004     1    .9835    .0000
 Q47PAGE#(2)       5.2791  1041.1269     .0000     1    .9960    .0000
 Q47PAGE#(3)      16.7582   736.2155     .0005     1    .9818    .0000
 Q47PAGE#(4)      -5.4929   751.4474     .0001     1    .9942    .0000
 Q47PAGE#(5)       7.7069   901.6544     .0001     1    .9932    .0000
 Q47PAGE#(6)       3.6913   741.3072     .0000     1    .9960    .0000
 Q47PAGE#(7)       4.0297   743.8147     .0000     1    .9957    .0000
 Q47PAGE#(8)      13.0189   736.2130     .0003     1    .9859    .0000
 Q47PAGE#(9)       5.1312   741.5956     .0000     1    .9945    .0000
 Q47PAGE#(10)      5.9783   888.5468     .0000     1    .9946    .0000
 Q47PAGE#(11)      6.5715   752.2514     .0001     1    .9930    .0000
 Q47PAGE#(12)      7.7069   901.6544     .0001     1    .9932    .0000
 Q47PAGE#(13)     14.8272   736.2155     .0004     1    .9839    .0000
 Q47PAGE#(14)      5.2791  1041.1269     .0000     1    .9960    .0000
PRYRSD5                                 7.0701     3    .0697    .1233
 PRYRSD5(1)        4.8241     1.9002    6.4453     1    .0111    .2513
 PRYRSD5(2)        3.9627     1.9046    4.3291     1    .0375    .1819
 PRYRSD5(3)       16.0848    87.0050     .0342     1    .8533    .0000
Constant         -20.9098   736.2165     .0008     1    .9773
```

		95% CI for Exp(B)	
Variable	Exp(B)	Lower	Upper
Q216PDRU(1)	11.3341	.5125	250.6796
Q216PDRU(2)	.0012	.0000	9.052+170
Q216PDRU(3)	17.8645	.0000	567821400
Q216PDRU(4)	.0000	.0000	7.423+289
Q216PDRU(5)	7121585.3	.0000	6.463E+82
Q216PDRU(6)	106.7022	.7520	15140.000
Q47PAGE#(1)	4013745.1	.0000	.
Q47PAGE#(2)	196.1954	.0000	.
Q47PAGE#(3)	18966107	.0000	.
Q47PAGE#(4)	.0041	.0000	.
Q47PAGE#(5)	2223.7038	.0000	.
Q47PAGE#(6)	40.0965	.0000	.
Q47PAGE#(7)	56.2434	.0000	.
Q47PAGE#(8)	450856.14	.0000	.
Q47PAGE#(9)	169.2167	.0000	.
Q47PAGE#(10)	394.7622	.0000	.
Q47PAGE#(11)	714.4073	.0000	.
Q47PAGE#(12)	2223.7038	.0000	.
Q47PAGE#(13)	2750232.2	.0000	.
Q47PAGE#(14)	196.1954	.0000	.
PRYRSD5(1)	124.4763	3.0036	5158.5600
PRYRSD5(2)	52.5993	1.2584	2198.5552
PRYRSD5(3)	9672165.6	.0000	1.107E+81

```
                Observed Groups and Predicted Probabilities
       320 +                                                                    +
           I                                                                    I
           I                                                                    I
  F        I                                                                    I
  R   240 +                                                                    +
  E        I0                                                                   I
  Q        I0                                                                   I
  U        I0                                                                   I
  E   160 +0                                                                   +
  N        I0                                                                   I
  C        I0                                                                   I
  Y        I0                                                                   I
       80 +0                                                                   +
           I0                                                                   I
           I0                                                                   I
           I0                                                                   I
Predicted ---------------+---------------+---------------+---------------
   Prob:  0             .25             .5             .75             1
   Group: 00000000000000000000000000000001111111111111111111111111111111

         Predicted Probability is of Membership for 1
         The Cut Value is .50
         Symbols: 0 - 0
                  1 - 1
         Each Symbol Represents 20 Cases.
```

```
        Total number of cases:        261 (Unweighted)
        Number of selected cases:    261
        Number of unselected cases: 0

        Number of selected cases:                      261
        Number rejected because of missing data:   17
        Number of cases included in the analysis: 244
```

Dependent Variable Encoding:

```
Original        Internal
Value           Value
        0         0
        1         1
```

```
                Parameter
Value   Freq  Coding
                (1)      (2)      (3)      (4)      (5)      (6)      (7)
Q47PAGE#
  20      1    .000    .000    .000    .000    .000    .000    .000
  22      6   1.000    .000    .000    .000    .000    .000    .000
  22      1    .000   1.000    .000    .000    .000    .000    .000
  24     13    .000    .000   1.000    .000    .000    .000    .000
  26     20    .000    .000    .000   1.000    .000    .000    .000
  26      2    .000    .000    .000    .000   1.000    .000    .000
  28     26    .000    .000    .000    .000    .000   1.000    .000
  31     32    .000    .000    .000    .000    .000    .000   1.000
  35     58    .000    .000    .000    .000    .000    .000    .000
  39     50    .000    .000    .000    .000    .000    .000    .000
  39      2    .000    .000    .000    .000    .000    .000    .000
  43     20    .000    .000    .000    .000    .000    .000    .000
  43      2    .000    .000    .000    .000    .000    .000    .000
  47     10    .000    .000    .000    .000    .000    .000    .000
  51      1    .000    .000    .000    .000    .000    .000    .000
```

```
              (8)      (9)     (10)     (11)     (12)     (13)     (14)
Q47PAGE#
      20     .000    .000    .000    .000    .000    .000    .000
      22     .000    .000    .000    .000    .000    .000    .000
      22     .000    .000    .000    .000    .000    .000    .000
      24     .000    .000    .000    .000    .000    .000    .000
      26     .000    .000    .000    .000    .000    .000    .000
      26     .000    .000    .000    .000    .000    .000    .000
      28     .000    .000    .000    .000    .000    .000    .000
      31     .000    .000    .000    .000    .000    .000    .000
      35    1.000    .000    .000    .000    .000    .000    .000
      39     .000   1.000    .000    .000    .000    .000    .000
      39     .000    .000   1.000    .000    .000    .000    .000
      43     .000    .000    .000   1.000    .000    .000    .000
      43     .000    .000    .000    .000   1.000    .000    .000
      47     .000    .000    .000    .000    .000   1.000    .000
      51     .000    .000    .000    .000    .000    .000   1.000
```

	Value	Freq	Parameter Coding					
			(1)	(2)	(3)	(4)	(5)	(6)
Q216PDRU								
	0	145	.000	.000	.000	.000	.000	.000
	1	72	1.000	.000	.000	.000	.000	.000
	2	9	.000	1.000	.000	.000	.000	.000
	3	9	.000	.000	1.000	.000	.000	.000
	4	3	.000	.000	.000	1.000	.000	.000
	5	2	.000	.000	.000	.000	1.000	.000
	6	4	.000	.000	.000	.000	.000	1.000
PRYRSD5								
	0	213	.000	.000	.000			
	1	19	1.000	.000	.000			
	2	7	.000	1.000	.000			
	3	5	.000	.000	1.000			

VITA

Elliot H. Graves was born on December 13, 1968, in Fayetteville, North Carolina, and is an American citizen. He graduated from the North Carolina School of Science and Mathematics in Durham, North Carolina, in 1987. He received his Bachelor of Science in Engineering Mechanics from the United States Air Force Academy in 1991. He received his Master of Science from Virginia Commonwealth University in 1997. He has served as a pilot and as a security police officer in the United States Air Force for six years, serving in Texas, North Carolina, Cuba, and South Korea. He has a wife, Lara, and two children, Kathryn and Joshua.